FINAL DRAFT
10/8/99

Sampling Report

CENTRAL STEEL & DRUM SITE
704-738 Doremus Ave.
Block 5074, Lot 1
Newark, Essex County
New Jersey 07105

Drum/Waste Pile Sampling Event
March 31, 1998

Prepared by:

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Emergency & Remedial Response Division
Removal Action Branch

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EXECUTIVE SUMMARY

The Site is located at 704-738 Doremus Avenue, Newark, Essex County, New Jersey, 07105, and consists of a large production building on a site occupying 8.5 acres and is situated in a highly industrialized area. The Site is adjacent to other industrial facilities. Within 1.5 miles of the Site are residential areas, industry, commercial properties, commuter/freight railroad lines and major city arterials.

On March 31, 1998, the U.S. EPA Removal Action Branch with the support of the Superfund Technical Assessment and Response Team (START), performed representative sampling of drums found at the Central Steel & Drum Site to provide analytical results that are legally defensible in a court of law to support cost recovery activities.

Samples were analyzed for target compound list (TCL) including tentatively identified compounds (TICs), target analyte list (TAL) metals, and RCRA characteristics (TCLP organics, metals and ignitability). The samples were collected by U.S. EPA and START personnel and submitted to a CLP participating private laboratory for analysis. In-addition, field screening for lead from the waste pile area was performed using an X-ray Fluorescence (XRF) unit.

In general, the waste streams were broken down into two classes: flammable organic liquids, and organic liquids and solids. The drums sampled were overpacked and staged within the warehouse property of the Central Steel & Drum site.

Waste analysis results is consistent with substances identified during the removal action, paint related waste materials (solids and liquids) consisting of thinners, lacquers, and varnishes. Many of the drums sampled were separated into both solid and liquid phases. EPA requested the contracted laboratory to analyze both phases to support identification of the material and its potential hazard.

The following hazardous constituents and concentration ranges were identified during the March 31, 1998, sampling event:

- **TARGET COMPOUND LIST (TCL)**

Waste solids: acetone (580 ppb to 1,100,000 ppb); methylene chloride (150 ppb to 490,000 ppb); benzene (4,700 ppb to 8,800 ppb); tetrachloroethene (250 ppb); toluene (1,800 ppb to 23,000,000 ppb); ethylbenzene (170 ppb to 8,800,000 ppb); xylene (840 ppb to 47,000,000 ppb); 2-butanone (160 ppb to 9,500,000 ppb); 4-methyl-2-pentanone (18,000 ppb to 10,000,000 ppb); 2-hexanone (3,400,000 ppb); naphthalene (24,000 ppb to 2,500,000 ppb); 2-methylnaphthalene (480 ppb to 570,000 ppb); fluorene (110,000 ppb); phenanthrene (170,000 ppb to 200,000 ppb); bis(2-ethylhexyl)phthalate (13,000 ppb to 210,000 ppb); and phenol (18,000,000 ppb to 36,000,000 ppb).

Waste liquids: acetone (4 ppb to 9,900 ppb); methylene chloride (4 ppb to 36 ppb); benzene (160 ppb to 270 ppb); toluene (11 ppb to 7,500 ppb); ethylbenzene (24 ppb to 1,100 ppb); xylene (1 ppb to 7,500 ppb); 2-butanone (5 ppb to 12,,000 ppb); 4-methyl-2-pentanone (99 ppb to 490

ppb); naphthalene (42 ppb to 390 ppb); 2-methylnaphthalene (34 ppb to 1,100 ppb); fluorene (120 ppb); phenanthrene (250 ppb); phenol (130 ppb to 5,300 ppb); benzyl alcohol (1,000 ppb to 1,200 ppb); 2-methylphenol (300 ppb to 1,500 ppb); 4-methylphenol (630 ppb to 1,200 ppb); and benzoic acid (620 ppb to 97,000 ppb).

See Table 1a for summary of all analytes and data result qualifiers.

- **TARGET ANALYTE LIST (TAL)**

Waste Solids: chromium (.49 ppm to 1,400 ppm); lead (18.1 ppm to 12,300 ppm) and zinc (5.8 ppm to 203 ppm).

Waste Liquids: chromium (15.2 ppm to 272 ppm); lead (18.4 ppm to 7,760 ppm) and zinc (2.8 ppm to 98,700 ppm).

See Table 1b for summary of all analytes and data result qualifiers.

- **RCRA TCLP CHARACTERISTIC RESULTS (Organics and Metals)**

Waste Solids: methyl ethyl ketone (250 ppb to 520,000 ppb); 2-methyl phenol (8 ppb to 51 ppb); 3+4-methyl phenol (43 ppb to 84 ppb); 2,4-D (2.6 ppb to 13 ppb); arsenic (.0035 ppm); barium (.0307 ppm to .437 ppm); cadium (.00045 ppm to .0091 ppm); chromium (.0013 ppm to .0265 ppm); and lead (.0209 ppm to 10.1 ppm).

Note: Sample 204415 (Drum # D0050) analytical result for methyl ethyl ketone (520,000 ppm), exceeded the TCLP regulatory limit of 200,000 ppb.

Waste Liquids: methyl ethyl ketone (13,000 ppb); 2-methyl phenol (190 ppb); 3+4-methyl phenol (520 ppb); barium (.0645 ppm); cadium (.0143 ppm); chromium (.0255 ppm); selenium (.188 ppm) and lead (.0516 ppm).

See Table 1c for summary of all analytes and data result qualifiers.

- **RCRA FLASHPOINT CHARACTERISTIC RESULTS**

Samples 204404, 204411, 204412, 204415, 204416, and 204417 were identified to have flash points less than 140 *°F* (60 *°C*), are hazardous waste.

X-Ray Fuorescence Report

Field screening for lead from the ash waste pile area was performed using an X-ray Fluorescence (XRF) unit. Lead concentration ranged from 167 ppm to 9,480 ppm. These concentration ranges are consistent with the levels found in the sampled drums (18.1 ppm to 12,300 ppm).

See Attachment III, X-Ray Fuorescence Report - April 22, 1998.

1.0 BACKGROUND

The Site is located at 704-738 Doremus Avenue, Newark, New Jersey, 07105. The Site is situated in an industrial area in the Iron Bound section of Newark and consists of a large manufacturing building located on 8.5 acres. Before 1952, an ink manufacturer occupied this Site (International Printing Ink, Division of Interchemical Corporation, now part of Inmont Corp.). From 1952 to approximately 1991, Central Steel and Drum operated a drum reconditioning business. After vacating the property, a container shipping operation leased the property. According to NJDEP, the property has been abandoned since 1994

The Site consists of one main building (previously several buildings that are now interconnected). It has been used as a commercial dumping ground (evidenced by truck tires, construction debris, etc.). The property is partially fenced and there are no gates at the entrance. However, vehicles cannot enter the property, since there are four large concrete blocks (approximately 3 feet high) barring entry.

The production building is 200ft x 500ft of masonry construction with a metal truss roof. The building is in deteriorated condition and the roof leaks. All utilities have been turned off, so there was no fire suppression system available in the building. The building was found to be unsecured and there was evidence of vandalism, dumping and public entry.

During the months of September 1997 thru June 1998, the U.S. EPA Response and Prevention Branch (RPB), performed a Time-Critical Removal Action at the Central Steel & Drum site. As part of this action, approximately 260, 55-gallon drums were sampled, characterized (i.e., hazardous characterization, compatibility, and bulking operations) and later overpacked for off-site disposal.

On March 31, 1998, the U.S. EPA Removal Action Branch with the support of the Superfund Technical Assessment and Response Team (START), performed representative sampling of drums found at the Central Steel & Drum Site to provide analytical results that are legally defensible in a court of law to support cost recovery activities.

The following sampling personnel were involved with work on this project:

Personnel	Responsibility
Louis DiGuardia	USEPA, OSC, Project Director
Ray Klimcsak	START, Project Manager, Field Coordinator,
Michael Mahnkopf	START, Site Health & Safety Officer
Joseph M. Soroka	START, Site QA/QC Officer
David Adams	START, Sampling, Shipping
Bruce Lin	START, Sampling, Shipping

This report covers sampling performed during the following time period(s):

- o March 31, 1998
- o November 25, 1997 (see Attachment IV, U.S EPA Region II, DESA/MAB RCRA Report)

2.0 DATA USE OBJECTIVES

The Region II, U.S. EPA RPB with technical support from START (Weston) conducted a Time-Critical Removal Action at the Central Steel & Drum site during the months of September 1997 thru June 1998. As part of this action, approximately 260, 55-gallon drums were sampled, characterized (i.e., hazardous characterization, compatibility, and bulking operations) and later overpacked for off-site disposal. In-addition, approximately 1100 tons of material from the ash waste pile was also characterized for disposal requirements.

The objective of this sampling event was to provide legally defensible analytical data to the USEPA enforcement group in their efforts to identify potential responsible parties for cost recovery.

This sampling event was performed by U.S. EPA Removal Action Branch and START personnel. Samples were analyzed for target compound list (TCL) including tentatively identified compounds (TICs), target analyte list (TAL) metals, and RCRA characteristics (TCLP organics, metals and ignitability). The samples were collected by U.S. EPA and START personnel and submitted to a CLP participating private laboratory for analysis. In-addition, field screening for lead from the waste pile area was performed using an X-ray Fluorescence (XRF) unit.

November 25, 1997 - DESA-MAB and NEIC RCRA Sampling Event

In November 25, 1997, samples were collected by U.S. EPA DESA/Monitoring and Assessment Branch and NEIC personnel during a RCRA sampling investigation. Approximately twenty-four, 55-gallon drums were sampled and analyzed for the RCRA ignitability characteristic. The samples were submitted to the US EPA Edison Laboratory for analysis. The full report is included in Attachment IV, U.S EPA Region II, RCRA Report - dated: November 25, 1997.

3.0 QUALITY ASSURANCE OBJECTIVES

The overall Quality Assurance (QA) objective for chemical measurement data associated with both sampling events was to provide analytical results that are legally defensible in a court of law. The QA program incorporated Quality Control (QC) procedures for field sampling, chain of custody, laboratory analyses, and reporting to assure generation of sound analytical results.

The EPA On-Scene Coordinator (OSC) specified a Level 2 QA objective (QA-2). Details of this QA level are provided in Section 6.0.

4.0 APPROACH AND SAMPLING METHODOLOGIES

4.1 Sampling Equipment

All products (liquid/sludge) samples form the overpacked drums were samples using dedicated coilwasa's or drum thieves. Soil/sediment samples were collected with dedicated disposable trowels in order to avoid cross contamination. XRF screening was accomplished using the Spectrace Model 9000 XRF unit.

Drum Sampling

All drums were sampled using dedicated sampling equipment. A glass composite liquid waste sampler (coliwasa) and/or drum thief was used for sampling liquid drum contents. The thief was inserted into the drum until a solid layer or bottom of the drum was encountered. Upon equilibration of the sample in the tube, it was capped by the sampler and carefully removed for discharge into an appropriate dedicated sample container by gravity. The glass coliwasa permits collection of a sample from the full depth of a drum and maintains it in the transfer tube until delivery to the sample container. The coliwasa is designed to permit representative sampling of multi-phase liquid wastes. The drum sampling was conducted as per U.S. EPA-ERT Drum Sampling Standard Operating Procedure (SOP) #2009, see Attachment I, Sampling QA/QC Work Plan.

Drum/Waste Pile Sampling

Disposable plastic scoops were used to sample solidified drum waste and/or ash waste pile material. All samples collected, except those for volatile organic analysis (VOC), were placed into a stainless steel container and mixed thoroughly before being transferred to an appropriate sample container. The solidified drum waste and/or ash waste pile sampling was conducted as per U.S. EPA-ERT Waste Pile Sampling SOP #2017, see Attachment I, Sampling QA/QC Work Plan.

All samples were collected using sampling equipment and procedures specified in the March 5, 1998, approved Sampling QA/QC Work Plan (and later revisions). All sampling equipment and materials were decontaminated according to the U.S. EPA-ERT Sampling Equipment Decontamination: SOP # 2006, see Attachment I, Sampling QA/QC Work Plan.

4.2 Sampling Design

A maximum of 20 samples were collected and analyzed for TCL (including TICs), TAL metals, and RCRA characteristics (TCLP organics, metals and ignitability). Drums selected for

analysis was based upon a careful review of HAZCAT information generated on the drums as part of the EPA-RPB Removal Action. In general, the waste streams were broken down into two classes: flammable organic liquids, and organic liquids and solids. The drums sampled were overpacked and staged within the warehouse property of the Central Steel & Drum site.

The samples were collected by U.S. EPA and START personnel and submitted to a CLP participating private laboratory for analysis. In-addition, field screening for lead from the ash waste pile area was performed using a X-ray Fluorescence (XRF) unit.

In general, QA/QC samples included the collection of one trip blank, one field duplicate and one matrix spike/matrix spike duplicate sample. Extra sample volume was submitted to allow the laboratory to perform matrix spike sample analysis. This analysis provides information about the effect of sample matrix on digestion and measurement methodology. Field duplicate samples provide an indication of analytical variability and analytical error and were not identified to the laboratory.

This sampling design was based on information currently available and modified on-site in light of field screening results and other acquired information. All deviations from the sampling plan were noted in the Sampling Trip Report (see Attachment II).

Field XRF Screening

The Spectrace Model 9000 XRF unit was used to provide screeing data within the ash waste pile area. XRF sample handling and analysis was conducted in accordance with U.S. EPA-ERT Spectrace 9000 Field Portable X-Ray Fluorescence Operating Procedure: SOP # 1713, as well as the manufacturer's instruction manual. The XRF in-situ method was utilized for this sampling event.

Low, medium and high concntration National Institute of Standards and Technology (NIST) certified Standard Reference Material (SRMs) - (SRMs:2709, 2710, and 2711 respectively) - are measured periodically during the analysis. NIST standards were measured immediately following the initial energy calibration, resolution, and zero background check sequence, every 10 sample measurements and at the end of an analytical run. The standard deviation of the non-consecutive analysis of the low standard (NIST 2709) is used to calculate the Method Detection Limit (MDL) and Method Quantitative Limit (MQL) for the Spectrace 9000 XRFn analysis. The MDL is defined as being 3 times the standard deviation of the non-consecutive analyses of the low standard, whereas the MQL is defined as being 10 times the standard deviation of the non-consecutive analysis of the low standard.

An area for in-situ analysis was prepared by removing large rocks and debris. The soil surface was rendered flat and compact prior to analysis. The Spectrace 9000 probe was held firmly on the ground to maximize instrument contact with the ground. Movement of the probe was minimized during the analysis. A thin layer of 0.2-mil polypropylene XRF film was mounted on the surface to minimize contamination of the probe.

Course-grained soil conditions of contaminated material may preclude a truly representative sample and adversely affect the analysis results (typically by under reporting the target element).

Bassed upon the anticipated action levels, the XRF run times were 30 seconds for the Cd-119 source and 15 seconds each for the Fe-55 and AM-241 sources. Lead was the focus of the XRF screening analysis. These run times provided detection limits of approximately 100 ppm for each analyte. Based uponon the performance of the XRF spectrometer, these run times were modified as required. XRF QA/QC consisted, at a minimum, of one replicate measurement, one duplicate sample, and one NIST standard run for every ten samples.

No confirmation samples were obtained to confirm the XRF results. Therefore, the XRF results will be at a data quality level of QA-1.

4.3 Standard Operating Procedures (SOPs)

4.3.1 Sample Documentation

All sample documents were completed legibly, in ink. Any corrections or revisions were made by lining through the incorrect entry and by initialing the error.

FIELD LOGBOOK/WELL MONITORING LOG

The field logbook/well monitoring log, provides details of site activities and observations so that an accurate account of field procedures can be reconstructed in the writer's absence. All entries were dated and signed by the individuals making the entries, and include (at a minimum) the following:

1. Site name and project number.
2. Name(s) of personnel on site.
3. Dates and times of all entries (military time preferred).
4. Descriptions of all site activities, site entry and exit times.
5. Noteworthy events and discussions.
6. Weather conditions.
7. Site observations.
8. Sample and sample location identification and description*.
9. Subcontractor information and names of on-site personnel.
10. Date and time of sample collections, along with chain of custody information.
11. Record of photographs.
12. Site sketches.

* The description of the sample location was noted in such a manner as to allow the reader to reproduce the location in the field at a later date.

SAMPLE LABELS

Sample labels clearly identified the particular sample, and included the following:

1. Site/project number.
2. Sample identification number.
3. Sample collection date and time.
4. Designation of sample (grab or composite).

5. Sample preservation.
6. Analytical parameters.
7. Name of sampler.

Sample labels were written in indelible ink and securely affixed to the sample container. Tie-on labels were used and properly secured.

CHAIN OF CUSTODY RECORD

A chain-of-custody (COC) record was maintained from the time the sample was taken to its final deposition. Every transfer of custody was noted and signed for, and a copy of this record kept by each individual who signed. When samples (or groups of samples) were not under direct control of the individual responsible for them, they were stored in a locked container sealed with a custody seal.

The chain-of-custody record included the following:

1. Sample identification number.
2. Sample information.
3. Sample location.
4. Sample date.
5. Name(s) and signature(s) of sampler(s).
6. Signature(s) of any individual(s) with control over samples.

* Please refer to Trip Report (Attachment II) for copies of Chain-of-Custody Records.

CUSTODY SEALS

Custody seals were utilized to demonstrate that a sample container had not been tampered with, or opened. The individual in possession of the sample(s) signed and dated the seal, affixing it in such a manner that the container could not be opened without breaking the seal. The name of this individual, along with a description of the sample packaging, was noted in the field logbook/log and trip report.

4.3.2 Sampling Activities

Drum Sampling

Drum sampling activities were conducted in accordance with guidelines outlined in the U.S. EPA-ERT Drum Sampling Standard Operating Procedure (SOP) #2009, and Sampling Equipment Decontamination SOP #2006, see Attachment I, Sampling QA/QC Work Plan..

Solidified Drum Waste/Ash Waste Pile Sampling

The solidified drum waste and/or ash waste pile sampling was conducted in accordance with guidelines outlined in the U.S. EPA-ERT Waste Pile Sampling SOP #2017, and Sampling

Equipment Decontamination SOP #2006, see Attachment I, Sampling QA/QC Work Plan.

XRF Sampling

The XRF sampling was conducted as per U.S. EPA-ERT Spectrace 9000 Field Portable X-Ray Fluorescence Operating Procedure: SOP # 1713, as well as the manufacturer's instruction manual, see Attachment I, Sampling QA/QC Work Plan.

DESCRIPTION OF EVENTS

This report incorporates information generated for sampling performed during the following time periods:

- March 31, 1998 - US EPA Region II ERRD/RAB
- November 25, 1997 (see Attachment IV, U.S EPA Region II, DESA/MAB RCRA Report)

- March 31, 1998 - US EPA Region II ERRD/RAB

The Region II, U.S. EPA/RPB with technical support from START (Weston) conducted a Time-Critical Removal Action at the Central Steel & Drum site during the months of September 1997 thru June 1998. As part of this action, approximately 260, 55-gallon drums were sampled, characterized (i.e., hazardous characterization, compatibility, and bulking operations) and later overpacked for off-site disposal. In-addition, approximately 1,100 tons of material from the ash waste pile was also characterized for disposal requirements.

During this March 31, 1998, sampling event, a maximum of 20 samples were collected and analyzed for TCL (including TICs), TAL metals, and RCRA characteristics (TCLP organics, metals, and ignitability). Twenty drums were sampled for TCL/TAL analysis; four drums were selected for TCLP (organics & inorganics), and eleven drums were selected for RCRA ignitability characteristic.

Drums selected for analysis was based upon a careful review of HAZCAT information generated on the drums as part of the EPA-RPB Removal Action. In general, the waste streams were broken down into two classes: flammable organic liquids, and organic liquids and solids. The drums sampled were overpacked and staged within the warehouse property of the Central Steel & Drum site.

HAZCAT results were consistent with background information which indicated that Central Steel & Drum received drums from various industries ranging from food to paint manufacturing.

Sampling was initiated and completed on March 31, 1998, with packaging and shipping to the private CLP laboratory performed the same day (see Attachment II, Sampling Trip Report).

The sampling team consisted of Louis DiGuardia (ERRD/RAB), with support from members of START. Sampling procedures followed those described by the approved Sampling QA/QC

Work Plan (Attachment I).

A trip blank, equipment blank, environmental duplicate (MS/MSD) and blind duplicate samples were taken during this sampling event. See Attachment II, Trip Report, for more information on these QA/QC samples.

In-addition, field screening for lead from the ash waste pile area was performed using an X-ray Fluorescence (XRF) unit. See Attachment III, X-Ray Fuorescence Report - April 22, 1998.

o November 25, 1997 - DESA-MAB and NEIC RCRA Sampling Event

In November 25, 1997, samples were collected by U.S. EPA DESA/Monitoring and Assessment Branch and NEIC personnel during a RCRA sampling investigation. Approximately twenty-four, 55-gallon drums were sampled and analyzed for the RCRA ignitability characteristic. The samples were submitted to the US EPA Edison Laboratory for analysis. The full report in included in Attachment IV, U.S EPA Region II, RCRA Report - dated: November 25, 1997.

4.3.3 Sample Handling and Shipment

Each of the sample bottles were sealed and labeled according to the following protocol. Caps were secured with custody seals. Bottle labels contained all required information including site/project code and sample number, time and date of collection, analyses requested, and preservative used. Sealed bottles were placed in large metal or plastic coolers, and padded with an absorbent material such as vermiculite. All packaging conformed to IATA Transportation regulations for overnight carriers.

All sample documents were affixed to the underside of each cooler lid. The lid was sealed and affixed on at least two sides with custody seals so that any sign of tampering was easily visible.

4.4 Disposal of PPE and Contaminated Sampling Materials

All used PPE and disposable sampling equipment was bagged and disposed of by the EPA.

5.0 FINDINGS

In general, the waste streams were broken down into two classes: flammable organic liquids, and organic liquids and solids. The drums sampled were overpacked and staged within the warehouse property of the Central Steel & Drum site.

Waste analysis results is consistent with substances identified during the removal action, paint related waste materials (solids and liquids) consisting of thinners, lacquers, and varnishes. Many of the drums sampled were separated into both solid and liquid phases. EPA requested the contracted laboratory to analyze both phases to support identification of the material and its potential hazard.

Analysis results on the drum samples taken March 31, 1998, indicates the following hazardous

constituents were present in the waste in the following ranges:

- **TARGET COMPOUND LIST (TCL)**

Waste solids: acetone (580 ppb to 1,100,000 ppb); methylene chloride (150 ppb to 490,000 ppb); benzene (4,700 ppb to 8,800 ppb); tetrachloroethene (250 ppb); toluene (1,800 ppb to 23,000,000 ppb); ethylbenzene (170 ppb to 8,800,000 ppb); xylene (840 ppb to 47,000,000 ppb); 2-butanone (160 ppb to 9,500,000 ppb); 4-methyl-2-pentanone (18,000 ppb to 10,000,000 ppb); 2-hexanone (3,400,000 ppb); naphthalene (24,000 ppb to 2,500,000 ppb); 2-methylnaphthalene (480 ppb to 570,000 ppb); fluorene (110,000 ppb); phenanthrene (170,000 ppb to 200,000 ppb); bis(2-ethylhexyl)phthalate (13,000 ppb to 210,000 ppb); and phenol (18,000,000 ppb to 36,000,000 ppb);

Waste liquids: acetone (4 ppb to 9,900 ppb); methylene chloride (4 ppb to 36 ppb); benzene (160 ppb to 270 ppb); toluene (11 ppb to 7,500 ppb); ethylbenzene (24 ppb to 1,100 ppb); xylene (1 ppb to 7,500 ppb); 2-butanone (5 ppb to 12,,000 ppb); 4-methyl-2-pentanone (99 ppb to 490 ppb); naphthalene (42 ppb to 390 ppb); 2-methylnaphthalene (34 ppb to 1,100 ppb); fluorene (120 ppb); phenanthrene (250 ppb); phenol (130 ppb to 5,300 ppb); benzyl alcohol (1,000 ppb to 1,200 ppb); 2-methylphenol (300 ppb to 1,500 ppb); 4-methylphenol (630 ppb to 1,200 ppb); and benzoic acid (620 ppb to 97,000 ppb)

See Table 1a for summary of all analytes and data result qualifiers.

- **TARGET ANALYTE LIST (TAL)**

Waste Solids: chromium (.49 ppm to 1,400 ppm); lead (18.1 ppm to 12,300 ppm) and zinc (5.8 ppm to 203 ppm).

Waste Liquids: chromium (15.2 ppm to 272 ppm); lead (18.4 ppm to 7,760 ppm) and zinc (2.8 ppm to 98,700 ppm).

See Table 1b for summary of all analytes and data result qualifiers.

- **RCRA TCLP CHARACTERISTIC RESULTS (Organics and Metals)**

Waste Solids: methyl ethyl ketone (250 ppb to 520,000 ppb); 2-methyl phenol (8 ppb to 51 ppb); 3+4-methyl phenol (43 ppb to 84 ppb); 2,4-D (2.6 ppb to 13 ppb); arsenic (.0035 ppm); barium (.0307 ppm to .437 ppm); cadium (.00045 ppm to .0091 ppm); chromium (.0013 ppm to .0265 ppm); and lead (.0209 ppm to 10.1 ppm).

Note: Sample 204415 (Drum # D0050) analytical result for methyl ethyl ketone (520,000 ppm), exceeded the TCLP regulatory limit of 200,000 ppb.

Waste Liquids: methyl ethyl ketone (13,000 ppb); 2-methyl phenol (190 ppb); 3+4-methyl phenol (520 ppb); barium (.0645 ppm); cadium (.0143 ppm); chromium (.0255 ppm); selenium (.188 ppm) and lead (.0516 ppm).

See Table 1c for summary of all analytes and data result qualifiers.

- **RCRA FLASHPOINT CHARACTERISTIC RESULTS**

Samples 204404, 204411, 204412, 204415, 204416, and 204417 were identified to have flash points less than 140 *°F (60 °C),* are hazardous waste.

In November 25, 1997, samples were collected by U.S. EPA DESA/Monitoring and Assessment Branch and NEIC personnel during a RCRA sampling investigation. Approximately twenty-four, 55-gallon drums were sampled and analyzed for the RCRA ignitability characteristic.

Nineteen of the twenty four samples taken were identified to be hazardous with flash points less than 140 *°F (60 °C).* Thes results are consistent with th eresults from this March 31, 1998, sampling event.

The full report is included in Attachment IV, U.S EPA Region II, RCRA Report - dated: November 25, 1997.

XRF Sampling Results

Field screening for lead from the ash waste pile area was performed using an X-ray Fluorescence (XRF) unit. Lead concentration ranged from 167 ppm to 9,480 ppm. These concentration ranges are consistent with the levels found in the drums sampled (18.1 ppm to 12,300 ppm)..

See Attachment III, X-Ray Fuorescence Report - April 22, 1998.

6.0 PROJECT ORGANIZATION AND RESPONSIBILITIES

The EPA OSC, Louis DiGuardia, provided overall direction to the staff concerning project sampling needs, objectives, and schedule. The Project Manager (PM), Ray Klimcsak (START), was the primary point of contact with the OSC. The PM was responsible for the development and completion of the Sampling QA/QC Plan, project team organization, and supervision of all project tasks, including reporting and deliverables. The Site QC Coordinator was responsible for ensuring field adherence to the Sampling QA/QC Plan and recording of any deviations. The START Analytical Services Coordinator, Smita Sumbaly, was site contact with the subcontracted laboratory, if necessary.

CLP analyses were arranged for all aqueous samples. START personnel transferred custody of the groundwater samples for shipment to the appropriate CLP laboratory. The raw analytical data from the laboratory was provided to the START Analytical Services Group for data validation.

7.0 QA REQUIREMENTS

The following requirements apply to the respective QA Objectives and parameters identified in

Section 3.0. The QA Protocols for a Level 2 QA objective sampling event are applicable to all sample matrices and include:

1. Sample documentation in the form of field logbooks, appropriate field data sheets, and chain of custody records (chain of custody records are optional for field screening locations).

2. Calibration of all monitoring and/or field-portable analytical equipment prior to collection and analyses of samples with results and/or performance check procedures/methods summarized and documented in a field, personal, and/or instrument log notebook.

3. Field or laboratory determined method detection limits (MDLs) will be recorded along with corresponding analytical sample results, where appropriate.

4. Analytical holding times as determined from the time of sample collection through analysis. These will be documented in the field logbook or by the laboratory in the final data deliverable package.

5. Initial and continuous instrument calibration data.

6. QC blank results (rinsate, trip, method, preparation, instrument, etc.), as applicable.

7. Collection and analysis of blind field duplicate and MS/MSD QC samples to provide a quantitative measure of the analytical precision and accuracy, as applicable.

8. Use of the following QC procedure for QC analyses and data validation:

   Definitive identification - confirm the identification of analytes on 100% of the "critical" samples, via an EPA-approved method; provide documentation such as gas chromatograms, mass spectra, etc.

6.1 DELIVERABLES

The START PM, maintained contact with the EPA OSC, Louis DiGuardia, to keep him informed about the technical and financial progress of this project. This communication commenced with the issuance of the work assignment and project scoping meeting. Ativities under this project were reported in status and trip reports and other deliverables (e.g., analytical reports, final reports) described herein The following deliverables were provided under this project:

TRIP REPORT

A trip report was prepared to provide a detailed accounting of what occurred during each sampling mobilization. Information provided included time of major events, dates, and personnel on site (including affiliations), see Attachment II.

MAPS/FIGURES

Maps depicting site layout, contaminant source areas, and sample locations were included in the trip report, as appropriate, see Figure 1 and Attachment II.

ANALYTICAL REPORT

An analytical report was prepared for samples analyzed under this plan. Information regarding the analytical methods or procedures employed, sample results, QA/QC results, chain of custody documentation, laboratory correspondence, and raw data was provided within this deliverable.

DATA REVIEW

A review of the data generated under this plan was undertaken. The assessment of data acceptability or useability is provided separately as part of the analytical report.

6.2 DATA VALIDATION

Data generated under this QA/QC Sampling Plan was evaluated according to criteria contained in the Removal Program Data Validation Procedures that accompany OSWER Directive number 9360.4-1 and in accordance with Region II guidelines.

Laboratory analytical results was assessed by the data reviewer for compliance with required precision, accuracy, completeness, representativeness, and sensitivity.

6.3 SYSTEM AUDIT

The Field QA/QC Officer observed sampling operations and reviewed subsequent analytical results to ensure compliance with the QA/QC requirements of the project/sampling event.

6.4 CORRECTIVE ACTION

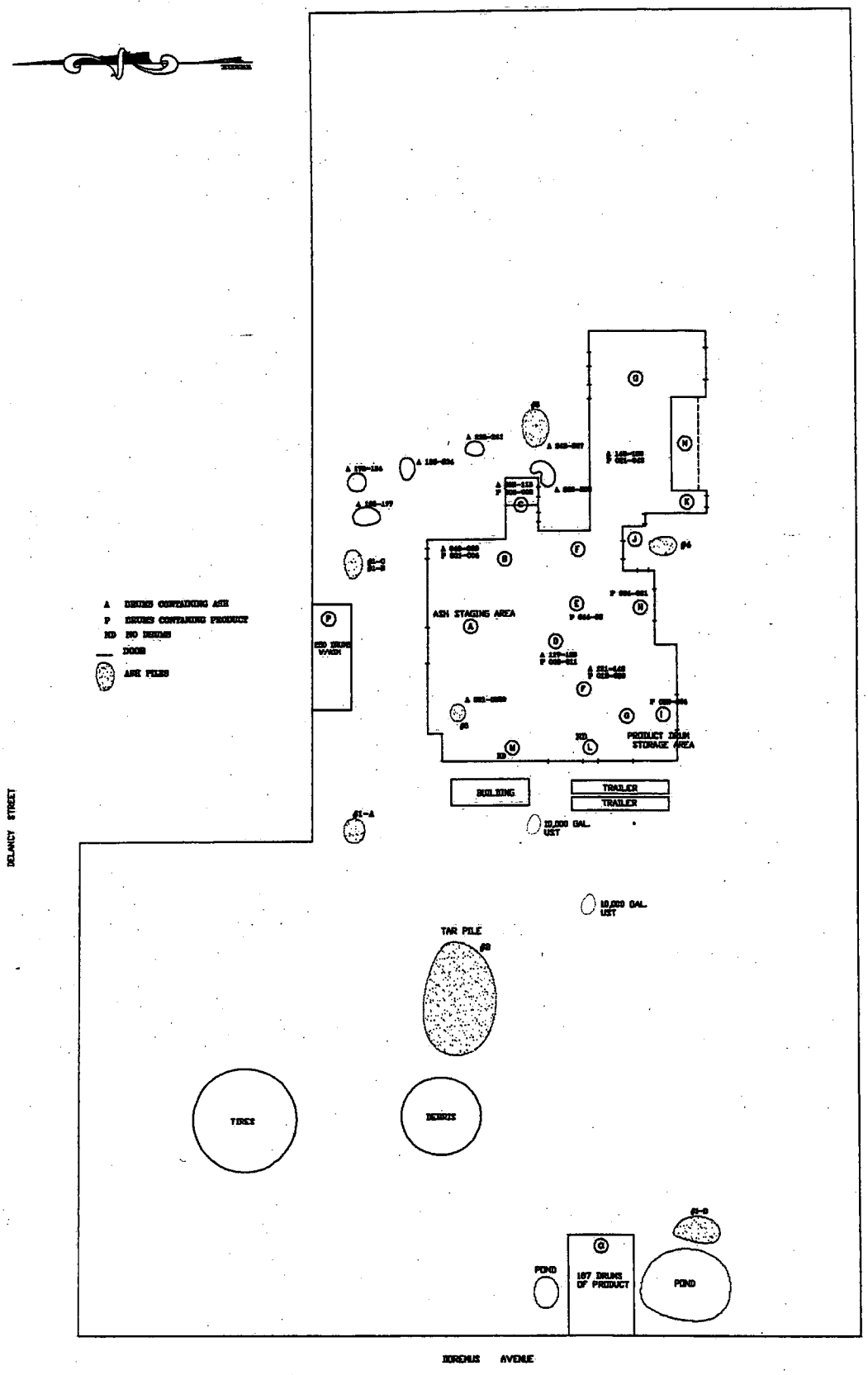
All provisions were taken in the field and laboratory to ensure that any problems that developed were addressed as quickly as possible to ensure the continuity of the project/sampling events. Any deviations from the approved sampling plan were noted in the final report.

CENTRAL STEEL & DRUM SITE
704-738 Doremus Ave.
Block 5074, Lot 1
Newark, Essex County
New Jersey 07105

Drum/Waste Pile Sampling Event
March 31, 1998

Figure 1

Site Map



GRAPHIC SCALE

75 0 30 75 150

(IN FEET)

1 inch = 75 ft.

(APPROXIMATE)

FIGURE 1 – DRUM LOCATIONS MAP
CENTRAL STEEL AND DRUM
NEWARK, NEW JERSEY
OCTOBER 1997

US EPA REMOVAL ACTION BRANCH

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM

CONTRACT# 68-W5-0018

Roy F. Weston, Inc.
FEDERAL PROGRAMS DIVISION

IN ASSOCIATION WITH PRC ENVIRONMENTAL MANAGEMENT, INC., C.C. JOHNSON & MALHOTRA, P.C., RESOURCE APPLICATIONS, INC., R.E. SARRIERA ASSOCIATES, AND GRB ENVIRONMENTAL SERVICES, INC.

DRAWN BY : J. HAMPTON JR.

EPA TASK MONITOR: G. DeANGELIS

START PROJECT MANAGER: R. KLIMCSAK

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CENTRAL STEEL & DRUM SITE
704-738 Doremus Ave.
Block 5074, Lot 1
Newark, Essex County
New Jersey 07105

Drum/Waste Pile Sampling Event
March 31, 1998

Table 1a

Summary of March 31, 1998
Target Compound List Analytical Results

OTHER ANALYTES WORK TABLE

Project: Central Steel & Drum

Sampling Date: March 31, 1998

SAMPLE #/CONCENTRATION (µg/Kg)

Volatiles	Method Detection Limit (1)	Waste 204401		Waste 204402		Waste 204403		Waste 204404		Waste 204405	
Medium Concentration		887526		887554		887556		887607		887609	
Percent Moisture		NA		NA		NA		NA		NA	
Dilution Factor (2)		16.7		1.0		12.5		25		16.7	
Chloromethane	3100	U	J	U	J	U	J	U	J	U	J
Bromomethane	2000	U	J	U	J	U	J	U	J	U	J
Vinyl Chloride	2700	U	J	U	J	U	J	U	J	U	J
Chloroethane	2600	U	J	U	J	U	J	U	J	U	J
Methylene Chloride	1400	U	J	U	J	U	J	U	J	U	J
Acetone	1300	U	J	580	J	U	J	U	J	U	J
Carbon Disulfide	1800	U	J	U	J	U	J	U	J	U	J
1,1-Dichloroethene	1500	U	J	U	J	U	J	U	J	U	J
1,1-Dichloroethane	920	U	J	U	J	U	J	U	J	U	J
1,2-Dichloroethene (total)	2500	U	J	U	J	U	J	U	J	U	J
Chloroform	1200	U	J	U	J	U	J	U	J	U	J
1,2-Dichloroethane	910	U	J	U	J	U	J	U	J	U	J
2-Butanone	900	U	J	160	J	U	J	U	J	U	J
1,1,1-Trichloroethane	1300	U	J	U	J	U	J	U	J	U	J
Carbon Tetrachloride	1100	U	J	U	J	U	J	U	J	U	J
Bromodichloromethane	1600	U	J	U	J	U	J	U	J	U	J
1,2-Dichloropropane	160	U	J	U	J	U	J	U	J	U	J
cis-1,3-Dichloropropene	1100	U	J	U	J	U	J	U	J	U	J
Trichloroethene	820	U	J	U	J	U	J	U	J	U	J
Dibromochloromethane	550	U	J	U	J	U	J	U	J	U	J
1,1,2-Trichloroethane	770	U	J	U	J	U	J	U	J	U	J
Benzene	1000	8800	J	U	J	4700	J	U	J	U	J
trans-1,3-Dichloropropene	1100	U	J	U	J	U	J	U	J	U	J
Bromoform	770	U	J	U	J	U	J	U	J	U	J
4-Methyl-2-Pentanone	1100	U	J	U	J	U	J	U	J	U	J
2-Hexanone	1100	U	J	U	J	U	J	U	J	U	J
Tetrachloroethene	800	U	J	250	J	U	J	U	J	U	J
1,1,2,2-Tetrachloroethane	930	U	J	U	J	U	J	U	J	U	J
Toluene	1400	230000	J	8500	J	120000	J	U	J	U	J
Chlorobenzene	1100	U	J	U	J	U	J	U	J	U	J
Ethylbenzene	990	110000	J	2900	J	51000	J	24000	J	11000	J
Styrene	940	U	J	U	J	260000	J	U	J	U	J
Xylene (total)	2100	760000	J	20000	J	3000	J	78000	J	39000	J
Vinyl Acetate	1500	U	J	U	J	U	J	U	J	U	J

(1) based on 4 grams of sample extracted with 10 mL of methanol; 100 uL of the extract purged with 5 mL of reagent water

(2) compared to the method blank

U - non-detected compound

J - estimated value

Voasmed

OTHER ANALYTES WORK TABLE

Project: Central Steel & Drum

Sampling Date: March 31, 1998

SAMPLE #/CONCENTRATION (µg/Kg)

Volatiles Medium Concentration Percent Moisture Dilution Factor (2)	Method Detection Limit (1)	Waste 204406 887615 NA 1.0	Waste 204407 887617 NA 1.0	Waste 204408 887619 NA 1.0	Waste 204409 887621 NA 200	Waste 204410 887622 NA 1000
Chloromethane	3100	U J	U J	U J	U J	U J
Bromomethane	2000	U J	U J	U J	U J	U J
Vinyl Chloride	2700	U J	U J	U J	U J	U J
Chloroethane	2600	U J	U J	U J	U J	U J
Methylene Chloride	1400	150 J	U J	U J	U J	U J
Acetone	1300	U J	U J	U J	U J	U J
Carbon Disulfide	1800	U J	U J	U J	U J	U J
1,1-Dichloroethene	1500	U J	U J	U J	U J	U J
1,1-Dichloroethane	920	U J	U J	U J	U J	U J
1,2-Dichloroethene (total)	2500	U J	U J	U J	U J	U J
Chloroform	1200	U J	U J	U J	U J	U J
1,2-Dichloroethane	910	U J	U J	U J	U J	U J
2-Butanone	900	U J	U J	U J	U J	U J
1,1,1-Trichloroethane	1300	U J	U J	U J	U J	U J
Carbon Tetrachloride	1100	U J	U J	U J	U J	U J
Bromodichloromethane	1600	U J	U J	U J	U J	U J
1,2-Dichloropropene	160	U J	U J	U J	U J	U J
cis-1,3-Dichloropropene	1100	U J	U J	U J	U J	U J
Trichloroethene	820	U J	U J	U J	U J	U J
Dibromochloromethane	550	U J	U J	U J	U J	U J
1,1,2-Trichloroethane	770	U J	U J	U J	U J	U J
Benzene	1000	U J	U J	U J	U J	U J
trans-1,3-Dichloropropene	1100	U J	U J	U J	U J	U J
Bromoform	770	U J	U J	U J	U J	U J
4-Methyl-2-Pentanone	1100	U J	U J	U J	U J	2300000 J
2-Hexanone	1100	U J	U J	U J	U J	U J
Tetrachloroethene	800	U J	U J	U J	U J	U J
1,1,2,2-Tetrachloroethane	930	U J	U J	U J	U J	U J
Toluene	1400	3300 J	2500 J	1800 J	1100000 J	8400000 J
Chlorobenzene	1100	U J	U J	U J	U J	U J
Ethylbenzene	990	230 J	170 J	U J	610000 J	3000000 J
Styrene	940	U J	U J	U J	U J	U J
Xylene (total)	2100	1100 J	840 J	U J	3400000 J	22000000 J
Vinyl Acetate	1500	U J	U J	U J	U J	U J

(1) based on 4 grams of sample extracted with 10 mL of methanol; 100 uL of the extract purged with 5 mL of reagent water
(2) compared to the method blank

U - non-detected compound
J - estimated value

Voasmed

OTHER ANALYTES WORK TABLE

Project: Central Steel & Drum

Sampling Date: March 31, 1998

SAMPLE #/CONCENTRATION (µg/Kg)

Volatiles Medium Concentration Percent Moisture Dilution Factor (2)	Method Detection Limit (1)	Waste 204411 887623 NA 3333	Waste 204412 887624 NA 500	Waste 204413 887626 NA 500	Waste 204414 887628 NA 100	Waste 204415 887634 NA 500
Chloromethane	3100	U J	U J	U J	U J	U J
Bromomethane	2000	U J	U J	U J	U J	U J
Vinyl Chloride	2700	U J	U J	U J	U J	U J
Chloroethane	2600	U J	U J	U J	U J	U J
Methylene Chloride	1400	U J	U J	U J	U J	U J
Acetone	1300	U J	U J	U J	U J	U J
Carbon Disulfide	1800	U J	U J	U J	U J	U J
1,1-Dichloroethene	1500	U J	U J	U J	U J	U J
1,1-Dichloroethane	920	U J	U J	U J	U J	U J
1,2-Dichloroethene (total)	2500	U J	U J	U J	U J	U J
Chloroform	1200	U J	U J	U J	U J	U J
1,2-Dichloroethane	910	U J	U J	U J	U J	U J
2-Butanone	900	U J	U J	R	U J	9500000 *J
1,1,1-Trichloroethane	1300	U J	U J	U J	U J	U J
Carbon Tetrachloride	1100	U J	U J	U J	U J	U J
Bromodichloromethane	1600	U J	U J	U J	U J	U J
1,2-Dichloropropane	160	U J	U J	U J	U J	U J
cis-1,3-Dichloropropene	1100	U J	U J	U J	U J	U J
Trichloroethene	820	U J	U J	U J	U J	U J
Dibromochloromethane	550	U J	U J	U J	U J	U J
1,1,2-Trichloroethane	770	U J	U J	U J	U J	U J
Benzene	1000	U J	U J	U J	U J	U J
trans-1,3-Dichloropropene	1100	U J	U J	U J	U J	U J
Bromoform	770	U J	U J	U J	U J	U J
4-Methyl-2-Pentanone	1100	U J	U J	180000 J	U J	3800000 *J
2-Hexanone	1100	U J	U J	U J	U J	U J
Tetrachloroethene	800	U J	U J	U J	U J	U J
1,1,2,2-Tetrachloroethane	930	U J	U J	U J	U J	U J
Toluene	1400	12000000 J	9200000 J	4600000 J	110000 J	11000000 J
Chlorobenzene	1100	U J	U J	U J	U J	U J
Ethylbenzene	990	7100000 J	1800000 J	3200000 J	62000 J	1300000 J
Styrene	940	U J	U J	U J	U J	U J
Xylene (total)	2100	47000000 J	8500000 J	17000000 J	350000 J	7100000 J
Vinyl Acetate	1500	U J	U J	U J	U J	U J

* 1: 1000 dilution

(1) based on 4 grams of sample extracted with 10 mL of methanol; 100 uL of the extract purged with 5 mL of the reagent water

(2) compared to method blank

U - non-detected compound

J - estimated value

R - unusable result

OTHER ANALYTES WORK TABLE

Project: Central Steel & Drum

Sampling Date: March 31, 1998

SAMPLE #/CONCENTRATION (µg/Kg)

Volatiles Medium Concentration	Method Detection Limit (1)	Waste 204416 887636		Waste 204417 887638		Waste 204418 887639		Waste 204419 887640		Waste 204420 887641	
Percent Moisture		NA		NA		NA		NA		NA	
Dilution Factor (2)		2000		500		1000		1000		1000	
Chloromethane	3100	U	J	U	J	U	J	U	J	U	J
Bromomethane	2000	U	J	U	J	U	J	U	J	U	J
Vinyl Chloride	2700	U	J	U	J	U	J	U	J	U	J
Chloroethane	2600	U	J	U	J	U	J	U	J	U	J
Methylene Chloride	1400	490000	J	U	J	U	J	U	J	U	J
Acetone	1300	780000	J	U	J	820000	J	U	J	1100000	J
Carbon Disulfide	1800	U	J	U	J	U	J	U	J	U	J
1,1-Dichloroethene	1500	U	J	U	J	U	J	U	J	U	J
1,1-Dichloroethane	920	U	J	U	J	U	J	U	J	U	J
1,2-Dichloroethene (total)	2500	U	J	U	J	U	J	U	J	U	J
Chloroform	1200	U	J	U	J	U	J	U	J	U	J
1,2-Dichloroethane	910	U	J	U	J	U	J	U	J	U	J
2-Butanone	900	R		R		R		R		R	
1,1,1-Trichloroethane	1300	U	J	U	J	U	J	U	J	U	J
Carbon Tetrachloride	1100	U	J	U	J	U	J	U	J	U	J
Bromodichloromethane	1600	U	J	U	J	U	J	U	J	U	J
1,2-Dichloropropene	160	U	J	U	J	U	J	U	J	U	J
cis-1,3-Dichloropropene	1100	U	J	U	J	U	J	U	J	U	J
Trichloroethene	820	U	J	U	J	U	J	U	J	U	J
Dibromochloromethane	550	U	J	U	J	U	J	U	J	U	J
1,1,2-Trichloroethane	770	U	J	U	J	U	J	U	J	U	J
Benzene	1000	U	J	U	J	U	J	U	J	U	J
trans-1,3-Dichloropropene	1100	U	J	U	J	U	J	U	J	U	J
Bromoform	770	U	J	U	J	U	J	U	J	U	J
4-Methyl-2-Pentanone	1100	U	J	U	J	6200000	J	3300000	J	10000000	J
2-Hexanone	1100	U	J	U	J	U	J	3400000	J	U	J
Tetrachloroethene	800	U	J	U	J	U	J	U	J	U	J
1,1,2,2-Tetrachloroethane	930	U	J	U	J	U	J	U	J	U	J
Toluene	1400	12000000	J	9700000	J	23000000	J	1200000	J	28000000	J
Chlorobenzene	1100	U	J	U	J	U	J	U	J	U	J
Ethylbenzene	990	8800000	J	2200000	J	4100000	J	6000000	J	6700000	J
Styrene	940	U	J	U	J	U	J	U	J	U	J
Xylene (total)	2100	38000000	J	9200000	J	17000000	J	37000000	J	23000000	J
Vinyl Acetate	1500	U	J	U	J	U	J	U	J	U	J

(1) based on 4 grams of sample extracted with 10 mL of methanol; 100 uL of the extract purged with 5 mL of the reagent water

(2) compared to method blank

U - non-detected compound

J - estimated value

R - unusable result

OTHER ANALYTES WORK TABLE

Project: Central Steel & Drum Site

Sampling Date: March 31, 1998

SAMPLE #/CONCENTRATION (µg/kg)

Semi-Volatiles	Method Detection Limit (1)		Waste 204401 887526	Waste 204402 887554	Waste 204403 887556	Waste 204404 887607	Waste 204405 887609
Percent Moisture	Low	Medium	NA	NA	NA	NA	NA
Conc. level/Dilution Factor	Level	Level	med./10	med./10	med./10	med./10	med./10
Phenol	570	8400	U	U	U	U	U
bis(2-Chloroethyl)ether	590	9100	U J	U J	U J	U	U
2-Chlorophenol	630	10000	U	U	U	U	U
1,3-Dichlorobenzene	510	9300	U	U	U	U	U
1,4-Dichlorobenzene	520	9000	U	U	R	U	U
Benzyl Alcohol	550	8400	U	U	U	U	U
1,2-Dichlorobenzene	590	9400	U	U	U	U	U
2-Methylphenol	650	12000	U	U	U	U	U
2,2'-oxybis(1-Chloropropane)	650	9200	U J	U J	U J	U J	U J
4-Methylphenol	1300	25000	U	U	U	U	U
N-Nitroso-di-n-propylamine	610	9900	U	U	R	U J	U J
Hexachloroethane	6000	8700	U	U	U	U	U
Nitrobenzene	680	9900	U	U	U	U J	U J
Isophorone	680	8700	U	U	U	U J	U J
2-Nitrophenol	620	8000	U	U	U	U	U
2,4-Dimethylphenol	610	9600	U	U	U	U	U
Benzoic Acid	1900	33000	U	U	U	U J	U J
bis(2-Chloroethoxy)methane	670	10000	U J	U J	U J	U J	U J
2,4-Dichlorophenol	550	8900	U	U	U	U	U
1,2,4-Trichlorobenzene	550	9300	U	U	R	U	U
Naphthalene	660	8200	400000	210000	270000	400000	360000
4-Chloroaniline	690	10000	U	U	U	U	U
Hexachlorobutadiene	560	10000	U	U	U	U	U
4-Chloro-3-methylphenol	750	10000	U	U	U	U	U
2-Methylnaphthalene	840	12000	570000	340000	480000	340000 J	310000 J
Hexachlorocyclopentadiene	660	26000	U J	U J	U J	U	U
2,4,6-Trichlorophenol	1300	22000	U	U	U	U	U
2,4,5-Trichlorophenol	1300	28000	U	U	U	U	U
2-Chloronaphthalene	970	13000	U	U	U	U	U
2-Nitroaniline	1100	16000	U	U	U	U J	U J
Dimethylphthalate	970	11000	U	U	U	U	U
Acenaphthylene	750	10000	U	U	U	U	U
2,6-Dinitrotoluene	670	12000	U	U	U	U	U

(1) medium level sample: based on the extraction of 1 gram of the sample with a final volume of 10 mL
low level sample: based on the extraction of 30 grams of the sample with a final volume of 1 mL

J - estimated value
U - non-detected compound
R - unusable data

OTHER ANALYTES WORK TABLE

Project: Central Steel & Drum Site

Sampling Date: March 31, 1998

SAMPLE #/CONCENTRATION (µg/kg)

Semi-Volatiles	Method Detection Limit (1)		Waste 204401 887526	Waste 204402 887554	Waste 204403 887556	Waste 204404 887607	Waste 204405 887609
Percent Moisture	Low	Medium	NA	NA	NA	NA	NA
Conc. level/Dilution Factor	Level	Level	med./10	med./10	med./10	med./10	med./10
3-Nitroaniline	690	26000	U	U	U	U	U
Acenaphthene	660	10000	U	U	U	U	U
2,4-Dinitrophenol	1700	31000	U	U	U	U	U
4-Nitrophenol	4500	25000	U	U	U	U	U
Dibenzofuran	690	11000	U	U	U	U	U
2,4-Dinitrotoluene	660	13000	U	U	U	U	U
Diethylphthalate	720	11000	U	U	U	U	U
4-Chlorophenyl-phenylether	660	9300	U	U	U	U	U
Fluorene	690	9700	U	U	U	110000	110000
4-Nitroaniline	110	33000	U	U	U	U	U
4,6-Dinitro-2-methylphenol	1800	28000	U	U	U	U	U
N-Nitrosodiphenylamine	1400	24000	U	U	U	U	U
4-Bromophenyl-phenylether	750	13000	U	U	U	U	U
Hexachlorobenzene	770	12000	U	U	U	U	U
Pentachlorophenol	1400	27000	U	U	R	U J	U J
Phenanthrene	620	12000	U	U	U	200000	170000
Anthracene	740	14000	U	U	U	U	U
Di-n-butylphthalate	770	10000	U	U	U	U	U
Fluoranthene	920	13000	U	U	U	U	U
Pyrene	730	14000	U	U	U	U	U
Butylbenzylphthalate	680	17000	U	U	U	U	U
bis(2-Ethylhexyl)phthalate	750	12000	U	100000 J	U	U	U
3,3-Dichlorobenzidine	500	16000	U	U	U	U	U
Benzo(a)anthracene	660	14000	U	U	U	U	U
Di-n-octylphthalate	480	12000	U	U	U	U	U
Benzo(b)fluoranthene	770	13000	U	U	U	U	U
Benzo(k)fluoranthene	620	16000	U	U	U	U	U
Benzo(a)pyrene	660	13000	U	U	U	U	U
Indeno(1,2,3-cd)pyrene	460	14000	U	U	U	U	U
Dibenz(a,h)anthracene	430	13000	U	U	U	U	U
Benzo(g,h,i)perylene	620	14000	U	U	U	U	U
Chrysene	540	15000	U	U	U	U	U

(1) medium level sample: based on the extraction of 1 gram of the sample with a final volume of 10 mL
low level sample: based on the extraction of 30 grams of the sample with a final volume of 1 mL

J - estimated value
U - non-detected compound
R - unusable data

OTHER ANALYTES WORK TABLE

Project: Central Steel & Drum Site

Sampling Date: March 31, 1998

SAMPLE #/CONCENTRATION (µg/kg)

Semi-Volatiles	Method Detection Limit (1)		Waste 204406 887615	Waste 204407 887617	Waste 204408 887619	Waste 204409 887621	Waste 204410 887622
Percent Moisture	low	medium	NA	NA	NA	NA	NA
Conc. level/Dilution Factor	level	level	med./10	med./10	med./10	med./10	med./10
Phenol	570	8400	U	U	U	U	U
bis(2-Chloroethyl)ether	590	9100	U J	U	U	U	U
2-Chlorophenol	630	10000	U	U	U	U	U
1,3-Dichlorobenzene	510	9300	U	U	U	U	U
1,4-Dichlorobenzene	520	9000	U	U	U	U	U
Benzyl Alcohol	550	8400	U	U	U	U	U
1,2-Dichlorobenzene	590	9400	U	U	U	U	U
2-Methylphenol	650	12000	U	U	U	U	U
2,2'-oxybis(1-Chloropropane)	650	9200	U J	U J	U J	U J	U J
4-Methylphenol	1300	25000	U	U	U	U	U
N-Nitroso-di-n-propylamine	610	9900	U	U J	U J	U J	U J
Hexachloroethane	6000	8700	U	U	U	U	U
Nitrobenzene	680	9900	U	U J	U J	U J	U J
Isophorone	680	8700	U	U J	U J	U J	U J
2-Nitrophenol	620	8000	U	U	U	U	U
2,4-Dimethylphenol	610	9600	U	U	U	U	U
Benzoic Acid	1900	33000	U	U J	U J	U J	U J
bis(2-Chloroethoxy)methane	670	10000	U J	U J	U J	U J	U J
2,4-Dichlorophenol	550	8900	U	U	U	U	U
1,2,4-Trichlorobenzene	550	9300	U	U	U	U	U
Naphthalene	660	8200	U	U	U	U	2500000
4-Chloroaniline	690	10000	U	U	U	U	U
Hexachlorobutadiene	560	10000	U	U	U	U	U
4-Chloro-3-methylphenol	750	10000	U	U	U	U	U
2-Methylnaphthalene	840	12000	U	R	R	R	R
Hexachlorocyclopentadiene	660	26000	U J	U	U	U	U
2,4,6-Trichlorophenol	1300	22000	U	U	U	U	U
2,4,5-Trichlorophenol	1300	28000	U	U	U	U	U
2-Chloronaphthalene	970	13000	U	U	U	U	U
2-Nitroaniline	1100	16000	U	U J	U J	U J	U J
Dimethylphthalate	970	11000	U	U	U	U	U
Acenaphthylene	750	10000	U	U	U	U	U
2,6-Dinitrotoluene	670	12000	U	U	U	U	U

(1) medium level sample: based on the extraction of 1 gram of the sample with a final volume of 10 mL
low level sample: based on the extraction of 30 grams of the sample with a final volume of 1 mL

J - estimated value
U - non-detected compound
R - unusable data

OTHER ANALYTES WORK TABLE

Project: Central Steel & Drum Site

Sampling Date: March 31, 1998

SAMPLE #/CONCENTRATION (µg/kg)

Semi-Volatiles	Method Detection Limit (1)		Waste 204406 887615	Waste 204407 887617	Waste 204408 887619	Waste 204409 887621	Waste 204410 887622
Percent Moisture	low	medium	NA	NA	NA	NA	NA
Conc. level/Dilution Factor	level	level	med./10	med./10	med./10	med./10	med./10
3-Nitroaniline	690	26000	U	U	U	U	U
Acenaphthene	660	10000	U	U	U	U	U
2,4-Dinitrophenol	1700	31000	U	U	U	U	U
4-Nitrophenol	4500	25000	U	U	U	U	U
Dibenzofuran	690	11000	U	U	U	U	U
2,4-Dinitrotoluene	660	13000	U	U	U	U	U
Diethylphthalate	720	11000	U	U	U	U	U
4-Chlorophenyl-phenylether	660	9300	U	U	U	U	U
Fluorene	690	9700	U	U	U	U	U
4-Nitroaniline	110	33000	U	U	U	U	U
4,6-Dinitro-2-methylphenol	1800	28000	U	U	U	U	U
N-Nitrosodiphenylamine	1400	24000	U	U	U	U	U
4-Bromophenyl-phenylether	750	13000	U	U	U	U	U
Hexachlorobenzene	770	12000	U	U	U	U	U
Pentachlorophenol	1400	27000	U	U J	U J	U J	U J
Phenanthrene	620	12000	U	U	U	U	U
Anthracene	740	14000	U	U	U	U	U
Di-n-butylphthalate	770	10000	U	U	U	U	U
Fluoranthene	920	13000	U	U	U	U	U
Pyrene	730	14000	U	U	U	U	U
Butylbenzylphthalate	680	17000	U	U	U	U	U
bis(2-Ethylhexyl)phthalate	750	12000	U	U	U	U	U
3,3-Dichlorobenzidine	500	16000	U	U	U	U	190000
Benzo(a)anthracene	660	14000	U	U	U	U	U
Di-n-octylphthalate	480	12000	U	U	U	U	U
Benzo(b)fluoranthene	770	13000	U	U	U	U	U
Benzo(k)fluoranthene	620	16000	U	U	U	U	U
Benzo(a)pyrene	660	13000	U	U	U	U	U
Indeno(1,2,3-cd)pyrene	460	14000	U	U	U	U	U
Dibenz(a,h)anthracene	430	13000	U	U	U	U	U
Benzo(g,h,i)perylene	620	14000	U	U	U	U	U
Chrysene	540	15000	U	U	U	U	U

(1) medium level sample: based on the extraction of 1 gram of the sample with a final volume of 10 mL
low level sample: based on the extraction of 30 grams of the sample with a final volume of 1 mL

J - estimated value
U - non-detected compound
R - unusable data

OTHER ANALYTES WORK TABLE

Project: Central Steel & Drum Site

Sampling Date: March 31, 1998

SAMPLE #/CONCENTRATION (µg/kg)

Semi-Volatiles	Method Detection Limit (1)		Waste 204411 887623	Waste 204412 887624	Waste 204413 887626	Waste 204414 887628	Waste 204415 887634
Percent Moisture	low	medium	NA	NA	NA	NA	NA
Conc. level/Dilution Factor	level	level	med./10	med./10	med./10	med./10	med./10
Phenol	570	8400	U	U	U	U	U
bis(2-Chloroethyl)ether	590	9100	U	U	U	U	U
2-Chlorophenol	630	10000	U	U	U	U	U
1,3-Dichlorobenzene	510	9300	U	U	U	U	U
1,4-Dichlorobenzene	520	9000	U	U	U	U	U
Benzyl Alcohol	550	8400	U	U	U	U	U
1,2-Dichlorobenzene	590	9400	U	U	U	U	U
2-Methylphenol	650	12000	U	U	U	U	U
2,2'-oxybis(1-Chloropropane)	650	9200	U J	U J	U J	U J	U J
4-Methylphenol	1300	25000	U	U	U	U	U
N-Nitroso-di-n-propylamine	610	9900	U J	U J	U J	U J	U J
Hexachloroethane	6000	8700	U	U	U	U	U
Nitrobenzene	680	9900	U J	U J	U J	U	U
Isophorone	680	8700	U J	U J	U J	U J	U J
2-Nitrophenol	620	8000	U	U	U	U	U
2,4-Dimethylphenol	610	9600	U	U	U	U	U
Benzoic Acid	1900	33000	U J	U J	U J	U J	U J
bis(2-Chloroethoxy)methane	670	10000	U J	U J	U J	U J	U J
2,4-Dichlorophenol	550	8900	U	U	U	U	U
1,2,4-Trichlorobenzene	550	9300	U	U	U	U	U
Naphthalene	680	8200	2100000	420000	1500000	1000000	U
4-Chloroaniline	690	10000	U	U	U	U	U
Hexachlorobutadiene	560	10000	U	U	U	U	U
4-Chloro-3-methylphenol	750	10000	U	U	U	U	U
2-Methylnaphthalene	840	12000	R	R	R	200000 J	R
Hexachlorocyclopentadiene	660	26000	U	U	U	U J	U J
2,4,6-Trichlorophenol	1300	22000	U	U	U	U	U
2,4,5-Trichlorophenol	1300	28000	U	U	U	U	U
2-Chloronaphthalene	970	13000	U	U	U	U	U
2-Nitroaniline	1100	16000	U J	U J	U J	U J	U J
Dimethylphthalate	970	11000	U	U	U	U	U
Acenaphthylene	750	10000	U	U	U	U	U
2,6-Dinitrotoluene	670	12000	U	U	U	U	U

(1) medium level sample: based on the extraction of 1 gram of the sample with a final volume of 10 mL
low level sample: based on the extraction of 30 grams of the sample with a final volume of 1 mL

J - estimated value
U - non-detected compound
R - unusable data

OTHER ANALYTES WORK TABLE

Project: Central Steel & Drum Site

Sampling Date: March 31, 1998

SAMPLE #/CONCENTRATION (µg/kg)

Semi-Volatiles	Method Detection Limit (1)		Waste 204411 887623	Waste 204412 887624	Waste 204413 887626	Waste 204414 887628	Waste 204415 887634
Percent Moisture	Low	Medium	NA	NA	NA	NA	NA
Conc. level/Dilution Factor	Level	Level	med./10	med./10	med./10	med./10	med./10
3-Nitroaniline	690	26000	U	U	U	U	U
Acenaphthene	660	10000	U	U	U	U	U
2,4-Dinitrophenol	1700	31000	U	U	U	U	U
4-Nitrophenol	4500	25000	U	U	U	U	U
Dibenzofuran	690	11000	U	U	U	U	U
2,4-Dinitrotoluene	660	13000	U	U	U	U	U
Diethylphthalate	720	11000	U	U	U	U	U
4-Chlorophenyl-phenylether	660	9300	U	U	U	U	U
Fluorene	690	9700	U	U	U	U	U
4-Nitroaniline	110	33000	U	U	U	U	U
4,6-Dinitro-2-methylphenol	1800	28000	U	U	U	U	U
N-Nitrosodiphenylamine	1400	24000	U	U	U	U	U
4-Bromophenyl-phenylether	750	13000	U	U	U	U	U
Hexachlorobenzene	770	12000	U	U	U	U	U
Pentachlorophenol	1400	27000	U J	U J	U J	U J	U J
Phenanthrene	620	12000	U	U	U	U	U
Anthracene	740	14000	U	U	U	U	U
Di-n-butylphthalate	770	10000	U	U	U	U	U
Fluoranthene	920	13000	U	U	U	U	U
Pyrene	730	14000	U	U	U	U	U
Butylbenzylphthalate	680	17000	U	U	U	U	U
bis(2-Ethylhexyl)phthalate	750	12000	100000 J	U	U	110000 J	U
3,3-Dichlorobenzidine	500	16000	U	U	U	U	U
Benzo(a)anthracene	660	14000	U	U	U	U	U
Di-n-octylphthalate	480	12000	U	U	U	U	U
Benzo(b)fluoranthene	770	13000	U	U	U	U	U
Benzo(k)fluoranthene	620	16000	U	U	U	U	U
Benzo(a)pyrene	660	13000	U	U	U	U	U
Indeno(1,2,3-cd)pyrene	460	14000	U	U	U	U	U
Dibenz(a,h)anthracene	430	13000	U	U	U	U	U
Benzo(g,h,i)perylene	620	14000	U	U	U	U	U
Chrysene	540	15000	U	U	U	U	U

(1) medium level sample: based on the extraction of 1 gram of the sample with a final volume of 10 mL
low level sample: based on the extraction of 30 grams of the sample with a final volume of 1 mL

J - estimated value
U - non-detected compound
R - unusable data

OTHER ANALYTES WORK TABLE

Project: Central Steel & Drum Site

Sampling Date: March 31, 1998

SAMPLE #/CONCENTRATION (µg/kg)

Semi-Volatiles	Method Detection Limit (1)		Waste 204416 887636	Waste 204417 887638	Waste 204418 887639	Waste 204419 887640	Waste 204420 887641
Percent Moisture	Low	Medium	NA	NA	NA	NA	NA
Conc. level/Dilution Factor	Level	Level	med./10	med./10	low (2)/700	low (2)/1	low (2)/700
Phenol	570	8400	U	U	18000000	R	36000000
bis(2-Chloroethyl)ether	590	9100	U	U	U	R	U
2-Chlorophenol	630	10000	U	U	U	R	U
1,3-Dichlorobenzene	510	9300	U	U	U	R	U
1,4-Dichlorobenzene	520	9000	U	U	U	R	U
Benzyl Alcohol	550	8400	U	U	U	R	U
1,2-Dichlorobenzene	590	9400	U	U	U	R	U
2-Methylphenol	650	12000	U	U	U	R	U
2,2'-oxybis(1-Chloropropane)	650	9200	U J	U J	U	R	U
4-Methylphenol	1300	25000	U	U	U	R	U
N-Nitroso-di-n-propylamine	610	9900	U J	U J	U	R	U
Hexachloroethane	6000	8700	U	U	U	R	U
Nitrobenzene	680	9900	U	U	U	R	U
Isophorone	680	8700	U J	U J	U	R	U
2-Nitrophenol	620	8000	U	U	U	R	U
2,4-Dimethylphenol	610	9600	U	U	U	R	U
Benzoic Acid	1900	33000	U J	U J	U	R	U
bis(2-Chloroethoxy)methane	670	10000	U J	U J	U	R	U
2,4-Dichlorophenol	550	8900	U	U	U	R	U
1,2,4-Trichlorobenzene	550	9300	U	U	U	R	U
Naphthalene	680	8200	630000	370000	U	24000 J	U
4-Chloroaniline	690	10000	U	U	U	R	U
Hexachlorobutadiene	560	10000	U	U	U	R	U
4-Chloro-3-methylphenol	750	10000	U	U	U	R	U
2-Methylnaphthalene	840	12000	R	R	U	480 J	U
Hexachlorocyclopentadiene	660	26000	U J	U J	U	R	U
2,4,6-Trichlorophenol	1300	22000	U	U	U	R	U
2,4,5-Trichlorophenol	1300	28000	U	U	U	R	U
2-Chloronaphthalene	970	13000	U	U	U	R	U
2-Nitroaniline	1100	16000	U J	U J	U	R	U
Dimethylphthalate	970	11000	U	U	U	R	U
Acenaphthylene	750	10000	U	U	U	R	U
2,6-Dinitrotoluene	670	12000	U	U	U	R	U

(1) medium level sample: based on the extraction of 1 gram of the sample with a final volume of 10 mL
low level sample: based on the extraction of 30 grams of the sample with a final volume of 1 mL

(2) based on the extraction of 15 grams of the sample with a final volume of 5 mL

J - estimated value

U - non-detected compound

R - unusable data

OTHER ANALYTES WORK TABLE

Project: Central Steel & Drum Site

Sampling Date: March 31, 1998

SAMPLE #/CONCENTRATION (µg/kg)

Semi-Volatiles	Method Detection Limit (1)		Waste 204416 887636	Waste 204417 887638	Waste 204418 887639	Waste 204419 887640	Waste 204420 887641
Percent Moisture	Low	Medium	NA	NA	NA	NA	NA
Conc. level/Dilution Factor	Level	Level	med./10	med./10	low (2)/700	low (2)/1	low (2)/700
3-Nitroaniline	690	26000	U	U	U	R	U
Acenaphthene	680	10000	U	U	U	R	U
2,4-Dinitrophenol	1700	31000	U	U	U	R	U
4-Nitrophenol	4500	25000	U	U	U	R	U
Dibenzofuran	690	11000	U	U	U	R	U
2,4-Dinitrotoluene	680	13000	U	U	U	R	U
Diethylphthalate	720	11000	U	U	U	R	U
4-Chlorophenyl-phenylether	680	9300	U	U	U	R	U
Fluorene	690	9700	U	U	U	R	U
4-Nitroaniline	110	33000	U	U	U	R	U
4,6-Dinitro-2-methylphenol	1800	28000	U	U	U	R	U
N-Nitrosodiphenylamine	1400	24000	U	U	U	R	U
4-Bromophenyl-phenylether	750	13000	U	U	U	R	U
Hexachlorobenzene	770	12000	U	U	U	R	U
Pentachlorophenol	1400	27000	U J	U J	U	R	U
Phenanthrene	620	12000	U	U	U	R	U
Anthracene	740	14000	U	U	U	R	U
Di-n-butylphthalate	770	10000	U	U	U	5000 J	U
Fluoranthene	920	13000	U	U	U	R	U
Pyrene	730	14000	U	U	U	R	U
Butylbenzylphthalate	680	17000	U	U	U	2600 J	U
bis(2-Ethylhexyl)phthalate	750	12000	190000	210000	U	13000 J	U
3,3-Dichlorobenzidine	500	16000	U	U	U	R	U
Benzo(a)anthracene	660	14000	U	U	U	R	U
Di-n-octylphthalate	480	12000	U	U	U	560 J	U
Benzo(b)fluoranthene	770	13000	U	U	U	R	U
Benzo(k)fluoranthene	620	16000	U	U	U	R	U
Benzo(a)pyrene	660	13000	U	U	U	R	U
Indeno(1,2,3-cd)pyrene	460	14000	U	U	U	R	U
Dibenz(a,h)anthracene	430	13000	U	U	U	R	U
Benzo(g,h,i)perylene	620	14000	U	U	U	R	U
Chrysene	540	15000	U	U	U	R	U

(1) medium level sample: based on the extraction of 1 gram of the sample with a final volume of 10 mL
low level sample: based on the extraction of 30 grams of the sample with a final volume of 1 mL

(2) based on the extraction of 15 grams of the sample with a final volume of 5 mL

J - estimated value

U - non-detected compound

R - unusable data

OTHER ANALYTES WORK TABLE

Project: Central Steel and Drum Site

Sampling Date: March 31, 1998

SAMPLE #/CONCENTRATION (µg/kg)

Pesticides/PCBs	Method Detection Limit (1)		Waste 204401 887526	Waste 204402 887554	Waste 204403 887556	Waste 204404 887607	Waste 204405 887609
Percent Moisture	low	medium	NA	NA	NA	NA	NA
conc. level / Dilution Factor	level	level	med./25	med./25	med./25	med./25	med./25
Aldrin	1.0	60	340 J	U	U	U	U
alpha-BHC	1.0	60	U	U	U	U	U
beta-BHC	1.0	60	U	U	U	U	U
delta-BHC	1.0	60	U	U	U	U	U
gamma-BHC (Lindane)	1.0	60	390 J	U	340 J	U	U
4,4'-DDD	3.5	210	U	U	U	U	U
4,4'-DDE	3.5	210	400 J	U	U	U	U
4,4'-DDT	3.5	210	U	U	U	U	U
Dieldrin	1.5	90	U	U	U	U	U
Endosulfan I	1.5	90	1900 J	1800 J	U	U	U
Endosulfan II	3.5	210	U	U	U	U	U
Endosulfan Sulfate	2.0	120	U	U	U	U	U
Endrin	2.5	150	U	U	U	U	U
Endrin aldehyde	1.0	60	U	U	U	U	U
Heptachlor	1.0	60	700 J	790 J	U	U	U
Heptachlor epoxide	1.0	60	U	U	U	U	U
Methoxychlor	3.5	210	U	U	U	U	U
Toxaphene	20	1200	U	U	U	U	U
Aroclor-1016	20	1200	U	U	U	U	U
Aroclor-1221	20	1200	U	U	U	U	U
Aroclor-1232	20	1200	U	U	U	U	U
Aroclor-1242	20	1200	U	U	U	U	U
Aroclor-1248	20	1200	U	U	U	U	U
Aroclor-1254	20	1200	U	U	U	U	U
Aroclor-1260	20	1200	U	U	U	U	U
Endrin ketone	2.0	120	U	U	U	U	U
Technical Chlordane	4.0	240	U	U	U	U	U
gamma-Chlordane	1.0	60	U	U	U	U	U
alpha-Chlordane	1.0	60	U	U	U	U	U
Isodrin	1.0	60	U	U	U	U	U

(1) low level: based on the extraction of 30 grams of the sample with final volume of 5 mL
medium level: based on the extraction of 1 gram of the sample with final volume of 10 mL

U - non-detected compound
J - estimated value
JN - presumptive evidence of a compound at an estimated value
R - rejected compound

OTHER ANALYTES WORK TABLE

Project: Central Steel and Drum Site

Sampling Date: March 31, 1998

SAMPLE #/CONCENTRATION (µg/kg)

Pesticides/PCBs	Method Detection Limit (1)		Waste 204406 887615	Waste 204407 887617	Waste 204408 887619	Waste 204409 887621	Waste 204410 887622
Percent Moisture	low	medium	NA	NA	NA	NA	NA
conc. level / Dilution Factor	level	level	med./5	med./5	med./5	med./25	med./2
Aldrin	1.0	60	U	U	U	U	R
alpha-BHC	1.0	60	U	U	U	U	R
beta-BHC	1.0	60	U	U	U	U	R
delta-BHC	1.0	60	R	R	U	U	R
gamma-BHC (Lindane)	1.0	60	R	170 JN	U	U	R
4,4'-DDD	3.5	210	U	U	U	U	R
4,4'-DDE	3.5	210	U	U	U	U	49 J
4,4'-DDT	3.5	210	U	380 J	U	U	R
Dieldrin	1.5	90	U	U	U	U	R
Endosulfan I	1.5	90	370 J	450 JN	U	U	R
Endosulfan II	3.5	210	260 J	U	U	U	R
Endosulfan Sulfate	2.0	120	U	U	U	U	R
Endrin	2.5	150	U	U	U	U	R
Endrin aldehyde	1.0	60	U	U	U	U	R
Heptachlor	1.0	60	R	R	U	U	R
Heptachlor epoxide	1.0	60	U	67 J	U	U	R
Methoxychlor	3.5	210	U	U	U	U	R
Toxaphene	20	1200	U	U	U	U	R
Aroclor-1016	20	1200	U J	U J	U J	U	R
Aroclor-1221	20	1200	U	U	U	U	R
Aroclor-1232	20	1200	U	U	U	U	R
Aroclor-1242	20	1200	U	U	U	U	R
Aroclor-1248	20	1200	U	U	U	U	R
Aroclor-1254	20	1200	U	U	U	U	R
Aroclor-1260	20	1200	U J	U J	U J	U	R
Endrin ketone	2.0	120	U	U	U	U	R
Technical Chlordane	4.0	240	U	U	U	U	R
gamma-Chlordane	1.0	60	U	U	U	U	R
alpha-Chlordane	1.0	60	350 JN	430	U	U	R
Isodrin	1.0	60	870 JN	R	U	U	R

(1) low level: based on the extraction of 30 grams of the sample with final volume of 5 mL
medium level: based on the extraction of 1 gram of the sample with final volume of 10 mL

U - non-detected compound
J - estimated value
JN - presumptive evidence of a compound at an estimated value
R - rejected compound

OTHER ANALYTES WORK TABLE

Project: Central Steel and Drum Site

Sampling Date: March 31, 1998

SAMPLE #/CONCENTRATION (µg/kg)

Pesticides/PCBs	Method Detection Limit (1)		Waste 204411 887623	Waste 204412 887624	Waste 204413 887626	Waste 204414 887628	Waste 204415 887634
Percent Moisture	low	medium	NA	NA	NA	NA	NA
conc. level / Dilution Factor	level	level	med./2	med./5	med./2	med./2	med./1
Aldrin	1.0	60	180 J	U	U	U	U
alpha-BHC	1.0	60	U	U	U	80 J	U
beta-BHC	1.0	60	U	U	150	U	U
delta-BHC	1.0	60	U	U	U	U	U
gamma-BHC (Lindane)	1.0	60	23 J	U	U	U	U
4,4'-DDD	3.5	210	U	U	U	250 J	U
4,4'-DDE	3.5	210	230 J	U	55 J	U	U
4,4'-DDT	3.5	210	U	U	700	81 J	U
Dieldrin	1.5	90	U	U	U	U	U
Endosulfan I	1.5	90	U	U	U	490 J	U
Endosulfan II	3.5	210	U	U	U	U	U
Endosulfan Sulfate	2.0	120	U	U	U	U	U
Endrin	2.5	150	U	U	U	U	U
Endrin aldehyde	1.0	60	260	U	180 JN	U	U
Heptachlor	1.0	60	130 JN	U	U	U	U
Heptachlor epoxide	1.0	60	R	U	U	390	U
Methoxychlor	3.5	210	440	U	U	U	U
Toxaphene	20	1200	U	U	U	U	U
Aroclor-1016	20	1200	U J	U J	U J	U	U
Aroclor-1221	20	1200	U	U	U	U	U
Aroclor-1232	20	1200	U	U	U	U	U
Aroclor-1242	20	1200	U	U	U	U	U
Aroclor-1248	20	1200	U	U	U	U	U
Aroclor-1254	20	1200	U	U	U	U	U
Aroclor-1260	20	1200	U J	U J	U J	U	U
Endrin ketone	2.0	120	U	U	U	150 J	U
Technical Chlordane	4.0	240	U	U	U	U	U
gamma-Chlordane	1.0	60	U	U	U	U	U
alpha-Chlordane	1.0	60	110 J	U	U	310	U
Isodrin	1.0	60	U	U	U	240 J	U

(1) low level: based on the extraction of 30 grams of the sample with final volume of 5 mL
medium level: based on the extraction of 1 gram of the sample with final volume of 10 mL

U - non-detected compound
J - estimated value
JN - presumptive evidence of a compound at an estimated value
R - rejected compound

OTHER ANALYTES WORK TABLE

Project: Central Steel and Drum Site

Sampling Date: March 31, 1998

SAMPLE #/CONCENTRATION (µg/kg)

Pesticides/PCBs	Method Detection Limit (1)		Waste 204416 887636 NA med./2	Waste 204417 887638 NA med./1	Waste 204418 887639 NA low (2)/5	Waste 204419 887640 NA low (2)/10	Waste 204420 887641 NA low (2)/5
Percent Moisture	low level	medium level					
conc. level / Dilution Factor							
Aldrin	1.0	60	U	26 J	R	U	U
alpha-BHC	1.0	60	U	80 JN	73 JN	21	130
beta-BHC	1.0	60	U	U	R	R	U
delta-BHC	1.0	60	U	U	U	U	U
gamma-BHC (Lindane)	1.0	60	U	U	U	U	U
4,4'-DDD	3.5	210	U	U	R	U	1300 J
4,4'-DDE	3.5	210	U	U	U	U	U
4,4'-DDT	3.5	210	U	U	760 JN	U	R
Dieldrin	1.5	90	U	U	16 J	U	16 J
Endosulfan I	1.5	90	U	44 J	R	34 J	66
Endosulfan II	3.5	210	U	U	100 J	U	R
Endosulfan Sulfate	2.0	120	120 J	U	R	270 J	82
Endrin	2.5	150	U	U	R	U	15
Endrin aldehyde	1.0	60	U	U	R	46	R
Heptachlor	1.0	60	U	U	R	U	U
Heptachlor epoxide	1.0	60	U	U	U	U	U
Methoxychlor	3.5	210	U	U	480 JN	U	R
Toxaphene	20	1200	U	U	U	U	U
Aroclor-1016	20	1200	U	U	U	U	U
Aroclor-1221	20	1200	U	U	U	U	U
Aroclor-1232	20	1200	U	U	U	U	U
Aroclor-1242	20	1200	U	U	U	U	U
Aroclor-1248	20	1200	U	U	U	U	U
Aroclor-1254	20	1200	U	U	U	U	U
Aroclor-1260	20	1200	U	U	U	U	U
Endrin ketone	2.0	120	74 J	U	250 JN	U	R
Technical Chlordane	4.0	240	U	U	U	U	U
gamma-Chlordane	1.0	60	U	U	U	U	U
alpha-Chlordane	1.0	60	U	U	U	U	U
Isodrin	1.0	60	U	U	R	U	U

(1) low level: based on the extraction of 30 grams of the sample with final volume of 5 mL
medium level: based on the extraction of 1 gram of the sample with final volume of 10 mL
(2) based on the extaction of 15 grams of the sample with a final volume of 5 mL

U - non-detected compound
J - estimated value
JN - presumptive evidence of a compound at an estimated value
R - rejected compound

OTHER ANALYTES WORK TABLE

Project: Central Steel and Drum Site

Sampling Date: March 31, 1998

SAMPLE #/CONCENTRATION (µg/L)

Volatiles Low Concentration	Method Detection Limit	Waste (liquid) 204401 887540	Waste (liquid) 204402 887555	Waste (liquid) 204403 887572	Waste (liquid) 204405 887610	Waste (liquid) 204406 887616	Waste (liquid) 204407 887618
Percent Moisture		–	–	–	–	–	–
Dilution Factor		10.5	2.5	111.0	1.0	1.0	1.4
Chloromethane	15	U J	U J	U J	U J	U J	U J
Bromomethane	10	U J	U J	U J	U J	U J	U J
Vinyl Chloride	10	U J	U J	U J	U J	U J	U J
Chloroethane	10	U J	U J	U J	U J	U J	U J
Methylene Chloride	10	30 J	18 J	U J	30 J	4 J	4 J
Acetone	15	1700 J	280 J	9900 J	38 J	44 J	85 J
Carbon Disulfide	10	U J	U J	U J	U J	U J	U J
1,1-Dichloroethene	5	U J	U J	U J	U J	U J	U J
1,1-Dichloroethane	5	U J	U J	U J	U J	U J	U J
1,2-Dichloroethene (total)	10	U J	U J	U J	U J	U J	U J
Chloroform	5	U J	U J	U J	U J	U J	U J
1,2-Dichloroethane	5	U J	U J	U J	U J	U J	U J
2-Butanone	20	1500 J	180 J	12000 J	17 J	71 J	110 J
1,1,1-Trichloroethane	10	U J	3 J	U J	U J	U J	U J
Carbon Tetrachloride	10	U J	U J	U J	U J	U J	U J
Bromodichloromethane	10	U J	U J	U J	U J	U J	U J
1,2-Dichloropropane	10	U J	U J	U J	U J	U J	U J
cis-1,3-Dichloropropene	15	U J	U J	U J	U J	U J	U J
Trichloroethene	5	U J	U J	U J	U J	U J	U J
Dibromochloromethane	10	U J	U J	U J	U J	U J	U J
1,1,2-Trichloroethane	5	U J	U J	U J	U J	U J	U J
Benzene	10	160 J	U J	U J	U J	U J	U J
trans-1,3-Dichloropropene	10	U J	U J	U J	U J	U J	U J
Bromoform	10	U J	U J	U J	U J	U J	U J
4-Methyl-2-Pentanone	10	U J	99 J	490 J	U J	150 J	210 J
2-Hexanone	15	U J	U J	U J	U J	U J	U J
Tetrachloroethene	10	U J	U J	U J	U J	U J	U J
1,1,2,2-Tetrachloroethane	10	U J	U J	U J	U J	U J	U J
Toluene	5	1700 J	270 J	360 J	U J	14 J	11 J
Chlorobenzene	10	U J	U J	U J	U J	U J	U J
Ethylbenzene	10	210 J	24 J	U J	U J	U J	U J
Styrene	5	U J	U J	U J	U J	U J	U J
Total Xylenes	15	1400 J	150 J	190 J	32 J	1 J	U J
Vinyl Acetate	10	U J	U J	U J	U J	U J	U J

U - non-detected compound

J - estimated value

OTHER ANALYTES WORK TABLE

Project: Central Steel and Drum Site

Sampling Date: March 31, 1998

SAMPLE #/CONCENTRATION (µg/L)

Volatiles Low Concentration	Method Detection Limit	Waste (liquid) 204408 887620	Waste (liquid) 204414 887630				
Percent Moisture		-	-				
Dilution Factor		1.0	40.0				
Chloromethane	15	U J	U J				
Bromomethane	10	U J	U J				
Vinyl Chloride	10	U J	U J				
Chloroethane	10	U J	U J				
Methylene Chloride	10	36 J	U J				
Acetone	15	20 J	1500 J				
Carbon Disulfide	10	U J	U J				
1,1-Dichloroethene	5	U J	U J				
1,1-Dichloroethane	5	U J	U J				
1,2-Dichloroethene (total)	10	U J	U J				
Chloroform	5	U J	U J				
1,2-Dichloroethane	5	U J	U J				
2-Butanone	20	5 J	1200 J				
1,1,1-Trichloroethane	10	U J	U J				
Carbon Tetrachloride	10	U J	U J				
Bromodichloromethane	10	U J	U J				
1,2-Dichloropropane	10	U J	U J				
cis-1,3-Dichloropropene	15	U J	U J				
Trichloroethene	5	U J	U J				
Dibromochloromethane	10	U J	U J				
1,1,2-Trichloroethane	5	U J	U J				
Benzene	10	U J	270 J				
trans-1,3-Dichloropropene	10	U J	U J				
Bromoform	10	U J	U J				
4-Methyl-2-Pentanone	10	10 J	U J				
2-Hexanone	15	U J	U J				
Tetrachloroethene	10	U J	U J				
1,1,2,2-Tetrachloroethane	10	U J	U J				
Toluene	5	52 J	7500 J				
Chlorobenzene	10	U J	U J				
Ethylbenzene	10	U J	1100 J				
Styrene	5	U J	U J				
Total Xylenes	15	U J	7500 J				
Vinyl Acetate	10	U J	U J				

U - non-detected compound

J - estimated value

Voaw

OTHER ANALYTES WORK TABLE

Project: Central Steel and Drum Site

Sampling Date: March 31, 1998

SAMPLE #/CONCENTRATION (µg/L)

Semi-Volatiles Low Concentration	Method Detection Limit (1)	Waste (liquid) 204401 887540	Waste (liquid) 204402 887555	Waste (liquid) 204403 887572	Waste (liquid) 204405 887610	Waste (liquid) 204406 887616
Percent Moisture		-	-	-	-	-
Sample Vol./Dilution Factor		(2)/1	(2)/1	(3)/1	(4)/1	(5)/1
Phenol	15	1400	U	5300	U	U
bis(2-Chloroethyl)ether	20	U	U	U	U	U
2-Chlorophenol	15	U	U	U	U	U
1,3-Dichlorobenzene	10	U	U	U	U	U
1,4-Dichlorobenzene	10	U	U	U	U	U
Benzyl Alcohol	20	1200 *	U	1000 J	U	U
1,2-Dichlorobenzene	10	U	U	U	U	U
2-Methylphenol	20	440	U	300 J	U	U
2,2'-oxybis(1-Chloropropane)	15	U	U	U	U	U
4-Methylphenol	35	630	U	680 J	U	U
N-Nitroso-di-n-propylamine	20	U	U	U	U	U
Hexachloroethane	10	U	U	U	U	U
Nitrobenzene	10	U	U	U	U	U
Isophorone	10	U	U	U	U	U
2-Nitrophenol	5	U	U	U	U	U
2,4-Dimethylphenol	35	U	U	U	U	U
Benzoic Acid	95	25000 *	620 J	97000 *	R	R
bis(2-Chloroethoxy)methane	15	U	U	U	U	U
2,4-Dichlorophenol	15	U	U	U	U	U
1,2,4-Trichlorobenzene	5	U	U	U	U	U
Naphthalene	5	110	42 J	130 J	290	U
4-Chloroaniline	5	U	U	U	U	U
Hexachlorobutadiene	5	U	U	U	U	U
4-Chloro-3-methylphenol	10	U	U	U	U	U
2-Methylnaphthalene	10	75 J	34 J	150 J	1100	U
Hexachlorocyclopentadiene	25	U	U	U	U	U
2,4,6-Trichlorophenol	25	U	U	U	U	U
2,4,5-Trichlorophenol	25	U	U	U	U	U
2-Chloronaphthalene	15	U	U	U	U	U
2-Nitroaniline	20	U	U	U	U	U
Dimethylphthalate	10	U	U	U	U	U
Acenaphthylene	10	U	U	U	U	U
2,6-Dinitrotoluene	15	U	U	U	U	U

* 1:30 dilution

* 1:20 dilution

(1) Based on the extraction of 1000 mL of the sample to a final volume of 1 mL. Deviation will change the method detection limit. See (2) through (6). Dilution factor stays at 1 unless dilution was made after sample extraction procedure.

(2) Based on the extraction of 50 mL of the sample to a final volume of 0.5 mL; equivalent to 10x dilution compared to method blank

(3) Based on the extraction of 5 mL of the sample to a final volume of 0.5 mL; equivalent to 100x dilution compared to method blank

(4) Based on the extraction of 25 mL of the sample to a final volume of 0.5 mL; equivalent to 20x dilution compared to method blank

(5) Based on the extraction of 10 mL of the sample to a final volume of 0.5 mL; equivalent to 50x dilution compared to method blank

(6) Base on the extraction of 20 mL of the sample to a final volume of 0.5 ml; equivalent to 25x dilution compared to method blank

X - indistinguishable coeluting isomers in the sample; the value is the estimated maximum possible concentration

U - non-detected compound

J - estimated value

R - Unusable result

Bnaw

OTHER ANALYTES WORK TABLE

Project: Central Steel and Drum Site

Sampling Date: March 31, 1998

SAMPLE #/CONCENTRATION (µg/L)

Semi-Volatiles Low Concentration	Method Detection Limit (1)	Waste (liquid) 204401 887540	Waste (liquid) 204402 887555	Waste (liquid) 204403 887572	Waste (liquid) 204405 887610	Waste (liquid) 204406 887616
Percent Moisture		-	-	-	-	-
Sample Vol./Dilution Factor		(2)/1	(2)/1	(3)/1	(4)/1	(5)/1
3-Nitroaniline	30	U	U	U	U	U
Acenaphthene	10	U	U	U	U	U
2,4-Dinitrophenol	75	U	U	U	U	U
4-Nitrophenol	45	U	U	U	U J	U J
Dibenzofuran	10	U	U	U	U	U
2,4-Dinitrotoluene	10	U	U	U	U	U
Diethylphthalate	15	U	U	U	U	U
4-Chlorophenyl-phenylether	10	U	U	U	U	U
Fluorene	10	U	U	U	120 J	U
4-Nitroaniline	35	U	U	U	U	U
4,6-Dinitro-2-methylphenol	45	U	U	U	U	U
N-Nitrosodiphenylamine	30	U	U	U	U	U
4-Bromophenyl-phenylether	15	U	U	U	U	U
Hexachlorobenzene	15	U	U	U	U	U
Pentachlorophenol	55	U	U	U	U	U
Phenanthrene	15	U	U	U	250 J	U
Anthracene	15	U	U	U	31 J	U
Di-n-butylphthalate	15	U	U	U	U	U
Fluoranthene	20	U J	U J	U J	29 J	U
Pyrene	10	U	U	U	55 J	U
Butylbenzylphthalate	10	U	U	U	U	U
bis(2-Ethylhexyl)phthalate	25	U	U	U	U	U
3,3-Dichlorobenzidine	10	U	U	U	U	U
Benzo(a)anthracene	10	U	U	U	23 J	U
Di-n-octylphthalate	20	U	U	U	U	U
Benzo(b)fluoranthene	10	U	U	U	27 XJ	U
Benzo(k)fluoranthene	20	U	U	U	28 XJ	U
Benzo(a)pyrene	5	U	U	U	U	U
Indeno(1,2,3-cd)pyrene	10	U	U	U	U	U
Dibenz(a,h)anthracene	10	U	U	U	U	U
Benzo(g,h,i)perylene	10	U	U	U	U	U
Chrysene	15	U	U	U	41 J	U

(1) Based on the extraction of 1000 mL of the sample to a final volume of 1 mL. Deviation will change the method detection limit. See (2) through (6). Dilution factor stays at 1 unless dilution was made after sample extraction procedure.
(2) Based on the extraction of 50 mL of the sample to a final volume of 0.5 mL; equivalent to 10x dilution compared to method blank
(3) Based on the extraction of 5 mL of the sample to a final volume of 0.5 mL; equivalent to 100x dilution compared to method blank
(4) Based on the extraction of 25 mL of the sample to a final volume of 0.5 mL; equivalent to 20x dilution compared to method blank
(5) Based on the extraction of 10 mL of the sample to a final volume of 0.5 mL; equivalent to 50x dilution compared to method blank
(6) Base on the extraction of 20 mL of the sample to a final volume of 0.5 ml; equivalent to 25x dilution compared to method blank

X - indistinguishable coeluting isomers in the sample; the value is the estimated maximum possible concentration
U - non-detected compound
J - estimated value
R - Unusable result

Bnaw

OTHER ANALYTES WORK TABLE

Project: Central Steel & Drum Site

Sampling Date: March 31, 1998

SAMPLE #/CONCENTRATION (µg/L)

Semi-Volatiles Low Concentration Percent Moisture Sample Vol./Dilution Factor	Method Detection Limit (1)	Waste (liquid) 204407 887618 - (6)/1	Waste (liquid) 204408 887620 - (2)/1	Waste (liquid) 204414 887630 - (2)/2		
Phenol	15	U	130 J	1800		
bis(2-Chloroethyl)ether	20	U	U	U J		
2-Chlorophenol	15	U	16 J	U		
1,3-Dichlorobenzene	10	U	U	U		
1,4-Dichlorobenzene	10	U	U	U		
Benzyl Alcohol	20	U	U	U		
1,2-Dichlorobenzene	10	U	U	U		
2-Methylphenol	20	U	16 J	1500		
2,2'-oxybis(1-Chloropropane)	15	U	U	U J		
4-Methylphenol	35	U	U	1200		
N-Nitroso-di-n-propylamine	20	U	U	U		
Hexachloroethane	10	U	U	U		
Nitrobenzene	10	U	U	U		
Isophorone	10	U	U	U J		
2-Nitrophenol	5	U	U	U		
2,4-Dimethylphenol	35	U	U	550 J		
Benzoic Acid	95	36 J	R	R		
bis(2-Chloroethoxy)methane	15	U	U	U J		
2,4-Dichlorophenol	15	U	U	U		
1,2,4-Trichlorobenzene	5	U	U	U		
Naphthalene	5	U	120	390		
4-Chloroaniline	5	U	U	U		
Hexachlorobutadiene	5	U	U	U		
4-Chloro-3-methylphenol	10	U	U	U		
2-Methylnaphthalene	10	U	U	170 J		
Hexachlorocyclopentadiene	25	U	U	U J		
2,4,6-Trichlorophenol	25	U	59 J	U		
2,4,5-Trichlorophenol	25	U	U	U		
2-Chloronaphthalene	15	U	U	U		
2-Nitroaniline	20	U	U	U J		
Dimethylphthalate	10	U	U	U		
Acenaphthylene	10	U	U	U		
2,6-Dinitrotoluene	15	U	U	U		

(1) Based on the extraction of 1000 mL of the sample to a final volume of 1 mL. Deviation will change the method detection limit. See (2) through (6). Dilution factor stays at 1 unless dilution was made after sample extraction procedure.
(2) Based on the extraction of 50 mL of the sample to a final volume of 0.5 mL; equivalent to 10x dilution compared to method blank
(3) Based on the extraction of 5 mL of the sample to a final volume of 0.5 mL; equivalent to 100x dilution comapred to method blank
(4) Based on the extraction of 25 mL of the sample to a final volume of 0.5 mL; equivalent to 20x dilution compared to method blank
(5) Based on the extraction of 10 mL of the sample to a final volume of 0.5 mL; equivalent to 50x dilution compared to method blank
(6) Based on the extraction of 20 mL of the sample to a final volume of 0.5 ml; equivalent to 25x dilution compared to method blank

U - non-detected compound
J - estimated value
R - Unusable result

Bnawt

OTHER ANALYTES WORK TABLE

Project: Central Steel & Drum Site

Sampling Date: March 31, 1998

SAMPLE #/CONCENTRATION (µg/L)

Semi-Volatiles Low Concentration	Method Detection Limit (1)	Waste (liquid) 204407 887618	Waste (liquid) 204408 887620	Waste (liquid) 204414 887630		
Percent Moisture		-	-	-		
Sample Vol./Dilution Factor		(6)/1	(2)/1	(2)/2		
3-Nitroaniline	30	U	U	U		
Acenaphthene	10	U	U	U		
2,4-Dinitrophenol	75	U	U	U J		
4-Nitrophenol	45	U J	U J	U		
Dibenzofuran	10	U	U	U		
2,4-Dinitrotoluene	10	U	U	U		
Diethylphthalate	15	U	U	110 J		
4-Chlorophenyl-phenylether	10	U	U	U		
Fluorene	10	U	U	U		
4-Nitroaniline	35	U	U	U		
4,6-Dinitro-2-methylphenol	45	U	U	U		
N-Nitrosodiphenylamine	30	U	U	36 J		
4-Bromophenyl-phenylether	15	U	U	U		
Hexachlorobenzene	15	U	U	U		
Pentachlorophenol	55	U	U	U		
Phenanthrene	15	U	U	U		
Anthracene	15	U	U	U		
Di-n-butylphthalate	15	U	U	U		
Fluoranthene	20	U	U	U		
Pyrene	10	U	U	U		
Butylbenzylphthalate	10	U	U	U		
bis(2-Ethylhexyl)phthalate	25	U	U	U		
3,3-Dichlorobenzidine	10	U	U	U		
Benzo(a)anthracene	10	U	U	U		
Di-n-octylphthalate	20	U	U	U		
Benzo(b)fluoranthene	10	U	U	U		
Benzo(k)fluoranthene	20	U	U	U		
Benzo(a)pyrene	5	U	U	U		
Indeno(1,2,3-cd)pyrene	10	U	U	U		
Dibenz(a,h)anthracene	10	U	U	U		
Benzo(g,h,i)perylene	10	U	U	U		
Chrysene	15	U	U	U		

(1) Based on the extraction of 1000 mL of the sample to a final volume of 1 mL. Deviation will change the method detection limit. See (2) through (6). Dilution factor stays at 1 unless dilution was made after sample extraction procedure.

(2) Based on the extraction of 50 mL of the sample to a final volume of 0.5 mL; equivalent to 10x dilution compared to method blank

(3) Based on the extraction of 5 mL of the sample to a final volume of 0.5 mL; equivalent to 100x dilution comapred to method blank

(4) Based on the extraction of 25 mL of the sample to a final volume of 0.5 mL; equivalent to 20x dilution compared to method blank

(5) Based on the extraction of 10 mL of the sample to a final volume of 0.5 mL; equivalent to 50x dilution compared to method blank

(6) Base on the extraction of 20 mL of the sample to a final volume of 0.5 ml; equivalent to 25x dilution compared to method blank

U - non-detected compound

J - estimated value

R - Unusable result

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OTHER ANALYTES WORK TABLE

Project: Central Steel and Drum Site

Sampling Date: March 31, 1998

SAMPLE #/CONCENTRATION (µg/L)

Pesticides Low Concentration	Method Detection Limit (1)	Waste (liquid) 204401 887540	Waste (liquid) 204402 887555	Waste (liquid) 204403 887572	Waste (liquid) 204405 887610	Waste (liquid) 204406 887616
Percent Moisture		NA	NA	NA	NA	NA
Sample vol / Dilution Factor		(2)/1.0	(2)/1.0	(3)/1.0	(4)/1.0	(5)/1.0
Aldrin	0.10	2.4 J	U	U	U	U
alpha-BHC	0.02	U	U	3.4 J	U	U
beta-BHC	0.10	U	U	U	U	U
delta-BHC	0.10	U	0.25 J	U	U	U
gamma-BHC (Lindane)	0.05	U	0.36 J	4.4 J	U	U
4,4'-DDD	0.50	U	U	U	U	U
4,4'-DDE	0.10	U	U	U	U	U
4,4'-DDT	0.05	U	0.71 J	U	U	U
Dieldrin	0.05	0.92 J	U	U	U	U
Endosulfan I	0.05	U	U	U	U	U
Endosulfan II	0.10	U	U	U	U	U
Endosulfan Sulfate	0.15	U	U	U	U	U
Endrin	0.10	U	U	U	U	U
Endrin aldehyde	0.75	U	0.84 J	U	U	U
Heptachlor	0.05	U	0.28 J	5.5 J	U	0.49 J
Heptachlor epoxide	0.05	U	0.77 J	U	U	U
Methoxychlor	0.50	U	U	U	U	U
Toxaphene	5.0	U	U	U	U	U
Aroclor-1016	0.50	U	U	U	U	U
Aroclor-1221	1.0	U	U	U	U	U
Aroclor-1232	1.5	U	U	U	U	U
Aroclor-1242	1.0	U	U	U	U	U
Aroclor-1248	1.5	U	U	U	U	U
Aroclor-1254	1.0	U	U	U	U	U
Aroclor-1260	0.50	U	U	U	U	U
Endrin ketone	0.05	U	U	U	U	U
Technical Chlordane	0.25	U	U	U	U	U
gamma-Chlordane	0.05	U	U	U	U	U
alpha-Chlordane	0.05	U	U	U	U	U
Isodrin	10	1.2 J	U	U	U	U

(1) Based on the extraction of 1000 mL of sample to a final volume of 10 mL. Deviation will change the method detection limit. See (2) through (6). Dilution factor stays at 1 unless dilution was made after sample extraction procedure.
(2) Based on the extraction of 50 mL of sample to a final volume of 10 mL; equivalent to 20x dilution compared to method blank
(3) Based on the extraction of 5 mL of sample to a final volume of 10 mL; equivalent to 200x dilution compared to method blank
(4) Based on the extraction of 25 mL of sample to a final volume of 10 mL; equivalent to 40x dilution compared to method blank
(5) Based on the extration of 10 mL of sample to a final volume of 10 mL; equivalent to 100x dilution compared to method blank
(6) Based on the extraction of 20 mL of sample to a final volume of 10 mL; equivalent to 50x dilution compared to method blank

U - non-detected compound
J - estimated value
R - rejected compound

OTHER ANALYTES WORK TABLE

Project: Central Steel and Drum Site

Sampling Date: March 31, 1998

SAMPLE #/CONCENTRATION (µg/L)

Pesticides Low Concentration	Method Detection Limit (1)	Waste (liquid) 204407 887618	Waste (liquid) 204414 887630	Waste (liquid) 204408 887620		
Percent Moisture		NA	NA	NA		
Sample vol / Dilution Factor		(6)/1.0	(2)/1.0	(2)/1.0		
Aldrin	0.10	U	U	U		
alpha-BHC	0.02	4.5 J	U	U		
beta-BHC	0.10	U	U	U		
delta-BHC	0.10	U	U	U		
gamma-BHC (Lindane)	0.05	U	0.50 J	U		
4,4'-DDD	0.50	4.6 J	U	U		
4,4'-DDE	0.10	U	U	U		
4,4'-DDT	0.05	U	U	U		
Dieldrin	0.05	R	U	U		
Endosulfan I	0.05	U	U	U		
Endosulfan II	0.10	R	U	U		
Endosulfan Sulfate	0.15	4.1 J	U	U		
Endrin	0.10	U	U	U		
Endrin aldehyde	0.75	4.9 J	U	U		
Heptachlor	0.05	R	U	U		
Heptachlor epoxide	0.05	U	U	U		
Methoxychlor	0.50	U	U	U		
Toxaphene	5.0	U	U	U		
Aroclor-1016	0.50	U	U	U		
Aroclor-1221	1.0	U	U	U		
Aroclor-1232	1.5	U	U	U		
Aroclor-1242	1.0	U	U	U		
Aroclor-1248	1.5	U	U	U		
Aroclor-1254	1.0	U	U	U		
Aroclor-1260	0.50	U	U	U		
Endrin ketone	0.05	U	U	U		
Technical Chlordane	0.25	U	U	U		
gamma-Chlordane	0.05	U	U	U		
alpha-Chlordane	0.05	4.8	U	U		
Isodrin	10	15 J	U	U		

(1) Based on the extraction of 1000 mL of sample to a final volume of 10 mL. Deviation will change the method detection limit. See (2) through (5). Dilution factor stays at 1 unless dilution was made after sample extraction procedure.
(2) Based on the extraction of 50 mL of sample to a final volume of 10 mL; equivalent to 20x dilution compared to method blank
(3) Based on the extraction of 5 mL of sample to a final volume of 10 mL; equivalent to 200x dilution compared to method blank
(4) Based on the extraction of 25 mL of sample to a final volume of 10 mL; equivalent to 40x dilution compared to method blank
(5) Based on the extration of 10 mL of sample to a final volume of 10 mL; equivalent to 100x dilution compared to method blank
(6) Based on the extraction of 20 mL of sample to a final volume of 10 mL; equivalent to 50x dilution compared to method blank

U - non-detected compound
J - estimated value
R - rejected compound

CENTRAL STEEL & DRUM SITE
704-738 Doremus Ave.
Block 5074, Lot 1
Newark, Essex County
New Jersey 07105

Drum/Waste Pile Sampling Event
March 31, 1998

Table 1b

Summary of March 31, 1998
Target Analyte List Analytical Results

TAL INORGANICS WORK TABLE

Project: Central Steel and Drum

START PM: Ray Klimcsak

Sampling Date: 31 March 1998

Matrix / Phase	IDL	Solid	Solid	Solid	Solid	Solid
EPA ID No.		204401	204402	204403	204404	204405
Drum Number		D025	D026	D033	D066	D067
Lab ID No.	NA	887526	887554	887556	887607	887609
Percent Solids	100	100	100	100	100	100
Dilution Factor	1	1	1	1	1	1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Total Metals						
Aluminum	1.68	29.4 J	10.4 B	19.4 B	187 J	796 J
Antimony	0.25	1.1 BJ	0.51 BJ	0.84 BJ	U J	0.27 BJ
Arsenic	0.31	U J	U J	U J	0.38 BJ	1.3 J
Barium	0.01	8.1 B	4.6 B	17.0 B	13.8 B	53.0
Beryllium	0.03	U	U	U	0.03 B	0.06 B
Cadmium	0.03	0.73 J	0.09 B	0.33 B	U	0.15 B
Calcium	6.50	624	236 B	909	165 B	724
Chromium	0.09	2.6	0.49 B	1.8	0.80 B	2.8
Cobalt	0.08	U	U	U	0.31 B	0.95 B
Copper	0.07	R	R	R	R	R
Iron	1.57	303	149	182	792	2880
Lead	0.16	18.1	26.5	19.9	18.9	71.9
Magnesium	0.67	357 B	105 B	270 B	78.7 B	292 B
Manganese	0.01	3.3	0.93 B	2.1	4.9	23.0
Mercury	0.05	U	U	U	U	U
Nickel	0.12	1.2 B	0.41 B	1.3 B	6.6	7.3
Potassium	4.11	115 B	17.3 B	28.6 B	33.7 B	77.3 B
Selenium	0.36	0.85 J	0.79 J	0.85 J	1.00 J	0.71 J
Silver	0.07	0.11 B	0.15 B	U	U	U
Sodium	30.7	356 B	224 B	297 B	628	521
Thallium	0.42	U J	U J	U J	U J	U J
Vanadium	0.06	U	U	U	70.6	55.0
Zinc	0.10	631	191	692	5.8	57.2

Note: the laboratory reported that all of the samples contained 100% solids

Inorganic Qualifiers

U - non-detected compound

B - analyte detected above the IDL but below the CRDL

J - estimated value

R - rejected compound

TAL INORGANICS WORK TABLE (CONTINUED)

Project: Central Steel and Drum

START PM: Ray Klimcsak

Sampling Date: 31 March 1998

Matrix / Phase	IDL	Solid	Solid	Solid	Solid	Solid
EPA ID No.		204406	204407	204408	204409	204410
Drum Number		D068	D368	D088	D005	D008
Lab ID No.	NA	887615	887617	887619	887621	887622
Percent Solids	100	100	100	100	100	100
Dilution Factor	1	1	1	1	1	1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Total Metals						
Aluminum	1.68	6.2 B	3.7 B	4.0 B	32.3 J	125 J
Antimony	0.25	U J	U J	U J	U J	7.6 J
Arsenic	0.31	U J	U J	U J	U J	U J
Barium	0.01	0.22 B	0.13 B	0.40 B	0.72 B	8.7 B
Beryllium	0.03	U	U	U	U	U
Cadmium	0.03	U	U	U	U	U
Calcium	6.50	20.6 B	15.5 B	18.6 B	25.4 B	222 B
Chromium	0.09	0.18 B	0.11 B	0.12 B	0.26 B	1400
Cobalt	0.08	U	U	U	0.10 B	90.6
Copper	0.07	R	R	R	R	R
Iron	1.57	8.5 B	5.6 B	29.0	128	59.8
Lead	0.16	U	0.29 B	0.74	0.49	5970
Magnesium	0.67	147 B	36.1 B	154 B	12.4 B	12.7 B
Manganese	0.01	0.20 B	0.08 B	0.21 B	0.51 B	18.3
Mercury	0.05	U	U	U	U	U
Nickel	0.12	U	U	U	1.0 B	0.31 B
Potassium	4.11	12.4 B	3.9 B	5.8 B	13.4 B	8.9 B
Selenium	0.36	0.75 J	0.50 J	0.45 BJ	0.60 J	0.65 J
Silver	0.07	U	U	U	U	0.66 B
Sodium	30.7	147 B	104 B	132 B	134 B	164 B
Thallium	0.42	U J	U J	U J	U J	U J
Vanadium	0.06	U	U	U	2.2 B	U
Zinc	0.10	203 J	61.9 J	265	12.3	17.1

Pb - 10X D/F

Note: the laboratory reported that all of the samples contained 100% solids

Inorganic Qualifiers

U - non-detected compound

B - analyte detected above the IDL but below the CRDL

J - estimated value

R - rejected compound

TAL INORGANICS WORK TABLE (CONTINUED)

Project: Central Steel and Drum

START PM: Ray Klimcsak

Sampling Date: 31 March 1998

Matrix / Phase	IDL	Solid	Solid	Solid	Solid	Solid
EPA ID No.		204411	204412	204413	204414	204415
Drum Number		D009	D010	D011	D027	D050
Lab ID No.	NA	887623	887624	887626	887628	887634
Percent Solids	100	100	100	100	100	100
Dilution Factor	1	1	1	1	1	1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Total Metals						
Aluminum	1.68	261 J	7.3 B	176 J	30.1 J	370 J
Antimony	0.25	8.2 J	U J	28.4 J	0.81 BJ	5.6 BJ
Arsenic	0.31	U J	U J	U J	U J	12.3 J
Barium	0.01	364	0.35 B	56.6	6.1 B	6.4 B
Beryllium	0.03	U	U	U	U	0.26 B
Cadmium	0.03	U	U	U	0.70 J	0.41 B
Calcium	6.50	569	15.1 B	5180	64.4 B	4590
Chromium	0.09	392	3.1	1200	0.86 B	2.4
Cobalt	0.08	44.7	41.0	53.3	U	2.4 B
Copper	0.07	R	R	R	R	R
Iron	1.57	87.9	41.8	99.6	311	30600
Lead	0.16	3330	2030 J	12300	15.7	11.7
Magnesium	0.67	34.7 B	4.4 B	55.0 B	18.7 B	2320
Manganese	0.01	54.7	0.84 B	16.2	1.8	101
Mercury	0.05	U	U	U	U	0.38
Nickel	0.12	0.33 B	U	0.42 B	1.3 B	3.4 B
Potassium	4.11	7.7 B	5.1 B	14.1 B	15.9 B	220 B
Selenium	0.36	0.74 J	0.67 J	0.46 BJ	0.80 J	3.1 J
Silver	0.07	0.19 B	0.56 B	0.53 B	U	U
Sodium	30.7	130 B	87.2 B	161 B	143 B	199 B
Thallium	0.42	U J	U J	U J	U J	0.57 BJ
Vanadium	0.06	U	U	U	0.13 B	2.6 B
Zinc	0.10	4.2	0.39 B	9.7	25.2	59.8

Pb - 10X D/F Pb - 10X D/F Fe - 5X D/F

Note: the laboratory reported that all of the samples contained 100% solids

Inorganic Qualifiers

U - non-detected compound

B - analyte detected above the IDL but below the CRDL

J - estimated value

R - rejected compound

TAL INORGANICS WORK TABLE (CONTINUED)

Project: Central Steel and Drum

START PM: Ray Klimcsak

Sampling Date: 31 March 1998

Matrix / Phase	IDL	Solid	Solid	Solid	Solid	Solid
EPA ID No.		204416	204417	204418	204419	204420
Drum Number		D056	D310	D061	D260	D361
Lab ID No.	NA	887636	887638	887639	887640	887641
Percent Solids	100	100	100	100	100	100
Dilution Factor	1	1	1	1	1	1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Total Metals						
Aluminum	1.68	201 J	7.3 B	421 J	114000 J	349 J
Antimony	0.25	20.9 J	0.61 BJ	0.93 BJ	3.2 BJ	0.93 BJ
Arsenic	0.31	U J	U J	0.31 BJ	U J	0.51 BJ
Barium	0.01	58.1	0.33 B	3590	99.9	2570
Beryllium	0.03	U	U	0.04 B	U	0.03 B
Cadmium	0.03	U	U	U	0.61 J	U
Calcium	6.50	1340	25.6 B	81.4 B	1200	67.2 B
Chromium	0.09	598	2.9	1.8	27.8	2.5
Cobalt	0.08	96.5	45.0	0.24 B	342	0.26 B
Copper	0.07	R	R	R	R	R
Iron	1.57	207	23.8	4880	6540	3690
Lead	0.16	7210	27.0 J	7.1	150	14.9
Magnesium	0.67	39.0 B	7.0 B	246 B	93.6 B	252 B
Manganese	0.01	44.7	0.91 B	4.6	76.1	4.0
Mercury	0.05	0.18	U	U	0.24	U
Nickel	0.12	0.53 B	U	2.4 B	9.6	2.4 B
Potassium	4.11	20.8 B	15.1 B	14.0 B	48.6 B	8.3 B
Selenium	0.36	1.0 J	0.93 J	2.1 J	1.0 J	2.2 J
Silver	0.07	0.74 B	0.84 B	U	0.17 B	U
Sodium	30.7	150 B	156 B	144 B	234 B	123 B
Thallium	0.42	U J	U J	U J	U J	U J
Vanadium	0.06	U	U	0.76 B	8.8	0.61 B
Zinc	0.10	10.1	0.56 B	2.8	142	2.8

Ba - 5X D/F Al - 5X D/F

Note: the laboratory reported that all of the samples contained 100% solids

Inorganic Qualifiers

U - non-detected compound

B - analyte detected above the IDL but below the CRDL

J - estimated value

R - rejected compound

TAL INORGANICS WORK TABLE (CONTINUED)

Project: Central Steel and Drum START PM: Ray Klimcsak

Sampling Date: 31 March 1998

Matrix / Phase	MDL	Liquid	Liquid	Liquid	Liquid
EPA ID No.		204401	204402	204403	204405
Drum Number		D025	D026	D033	D067
Lab ID No.	NA	887540	887555	887572	887610
Dilution Factor	1	2	2.5	25	5
Units	ug/L	ug/L	ug/L	ug/L	ug/L
Total Metals					
Aluminum	16.8	2100 J	U	U	192000 J
Antimony	2.5	612 J	U	398 BJ	29.8 BJ
Arsenic	3.1	32.9 J	U	U	334 J
Barium	0.1	60.3 BJ	10.5 B	172 BJ	7150 J
Beryllium	0.3	U	U J	U	8.0 BJ
Cadmium	0.3	12.0 J	1.4 BJ	20.6 BJ	31.0 J
Calcium	65.0	16500 J	16000 J	80700 BJ	239000 J
Chromium	0.9	25.4 J	U	50.4 BJ	272 J
Cobalt	0.8	U	5.2 J	26.3 BJ	125 BJ
Copper	0.7	1430 J	47.0 J	282 BJ	2280 J
Iron	15.7	68200 J	24800 J	190000 J	358000 J
Lead	1.6	3520 J	43.5 J	758 J	7760 J
Magnesium	6.7	10300 J	8430 BJ	48300 BJ	98900 J
Manganese	0.1	347 J	222 J	1250 J	3440 J
Mercury	0.1	U	U	U	5.3 J
Nickel	1.2	40.8 BJ	16.0 BJ	154 BJ	350 J
Potassium	41.1	156000 J	2440 B	71000 BJ	42700 J
Selenium	3.6	148 J	U	203 J	57.5 J
Silver	0.70	U	U	U	8.7 BJ
Sodium	307	232000 J	21000 J	523000 J	633000 J
Thallium	4.2	38.8 J	U	U	U
Vanadium	0.6	U	U	U	710 J
Zinc	1.0	29800 J	9180 J	98700 J	8310 J
		Hg - 4X D/F Zn - 20X D/F	Hg - 4X D/F	Hg - 50X D/F	Hg - 10X D/F

Note: the laboratory reported that all of the samples contained 100% solids

Inorganic Qualifiers

U - non-detected compound

B - analyte detected above the IDL but below the CRDL

J - estimated value

R - rejected compound

TAL INORGANICS WORK TABLE (CONTINUED)

Project: Central Steel and Drum

Sampling Date: 31 March 1998

Matrix / Phase	IDL	Liquid	Liquid	Liquid	Liquid
EPA ID No.		204406	204407	204408	204414
Drum Number		D068	D368	D088	D027
Lab ID No.	NA	887616	887618	887620	887630
Dilution Factor	1	10	10	5	2
Units	ug/L	ug/L	ug/L	ug/L	ug/L
Total Metals					
Aluminum	16.8	U	U	U	140 BJ
Antimony	2.5	28.1 BJ	U	46.9 BJ	9.2 BJ
Arsenic	3.1	U	U	U	U
Barium	0.1	24.0 BJ	18.6 BJ	74.5 BJ	148 BJ
Beryllium	0.3	U	U	U J	U
Cadmium	0.3	3.7 BJ	U	2.9 BJ	564 J
Calcium	65.0	4140 B	4240 B	5140 BJ	89100 J
Chromium	0.9	23.6 BJ	18.3 BJ	15.2 BJ	U
Cobalt	0.8	U	U	5.0 BJ	39.5 BJ
Copper	0.7	51.9 BJ	19.6 BJ	38.5 BJ	4390 J
Iron	15.7	2120 J	801 BJ	11200 J	91300 J
Lead	1.6	U	U	18.4 J	109 J
Magnesium	6.7	594000 J	581000 J	156000 J	23300 J
Manganese	0.1	124 BJ	134 BJ	95.1 J	2970 J
Mercury	0.1	U	U	U	U
Nickel	1.2	25.2 BJ	17.8 BJ	7.7 BJ	621 J
Potassium	41.1	1310 B	949 B	760 B	36600 J
Selenium	3.6	U J	95.9 J	20.2 BJ	21.5 J
Silver	0.70	U	U	U	1.6 BJ
Sodium	307	26200 BJ	22700 BJ	18300 BJ	75000 J
Thallium	4.2	U	U	U	10.6 BJ
Vanadium	0.6	U	U	U	2.1 BJ
Zinc	1.0	10500 J	7730 J	15900 J	38900 J

Hg - 20X D/F Hg - 20X D/F Hg - 10X D/F Hg - 4X D/F
Zn - 20X D/F

Inorganic Qualifiers
U - non-detected compound
B - analyte detected above the IDL but below the CRDL
J - estimated value
R - rejected compound

CENTRAL STEEL & DRUM SITE
704-738 Doremus Ave.
Block 5074, Lot 1
Newark, Essex County
New Jersey 07105

Drum/Waste Pile Sampling Event
March 31, 1998

Table 1c

Summary of March 31, 1998
TCLP Analytical Results

OTHER ANALYTES WORK TABLE

Project: Central Steel & Drum Site

Sampling Date: March 31, 1998 SAMPLE #/CONCENTRATION (µg/L)

TCLP Compounds	Regulatory Level	Liquid Phase 204403 887590	Waste 204403 887573	Waste 204404 887608	Waste 204415 887635	Waste 204416 887637
TCLP Volatiles						
Dilution Factor		83	5	5	5000	67
Benzene	500	U	U	U	U	U
Carbon Tetrachloride	500	U	U	U	U	U
Chlorobenzene	100000	U	U	U	U	U
Chloroform	6000	U	U	U	U	U
1,2-Dichloroethane	500	U	U	U	U	U
1,1-Dichloroethylene	700	U	U	U	U	U
Methyl Ethyl Ketone	200000	13000 J	250 J	270 J	520000 *	12000 J
Tetrachloroethylene	700	U	U	U	U	U
Trichloroethylene	500	U	U	U	U	U
Vinyl Chloride	200	U	U	U	U	U
TCLP Semi-Volatiles						
Extraction Ratio		4 mL->0.5 mL	0.1L->0. 5 mL	0.1L->0. 5 mL	0.1L->0. 5 mL	0.1L->0. 5 mL
2-Methylphenol	200000	190 J	51 J	U	U	8 J
3+4-Methylphenol	200000	520 J	84 J	U	U	43 J
Pentachlorophenol	100000	U	U	U	U	U
2,4,5-Trichlorophenol	400000	U	U	U	U	U
2,4,6-Trichlorophenol	2000	U	U	U	U	U
1,4-Dichlorobenzene	7500	U	U	U	U	U
2,4-Dinitrotoluene	130	U	U	U	U	U
Hexachlorobenzene	130	U	U	U	U	U
Hexachloro-1,3-butadiene	500	U	U	U	U	U
Hexachloroethane	3000	U	U	U	U	U
Nitrobenzene	2000	U	U	U	U	U
Pyridine	5000	U	U	U	U	U
TCLP Pesticides						
Extraction Ratio		2 mL-> 5 mL	0.1L->0. 5 mL	0.1L->0. 5 mL	0.1L->0. 5 mL	0.1L->0. 5 mL
Chlordane	30	U	U	U	U J	U
Endrin	20	U	U	U	U J	U
Heptachlor	8	U	U	U	U J	U
Heptachlor Epoxide	8	U	0.10 J	U	U J	U
Lindane	400	U	U	U	U J	U
Methoxychlor	10000	U	U	U	U J	U
Toxaphene	500	U	U	U	U J	U
TCLP Herbicides						
Extraction Ratio		4 mL-> 2.5 mL	0.1 L-> 2.5 mL	0.1 L-> 2.5 mL	0.1 L-> 2.5 mL	0.1 L-> 2.5 mL
2,4-D	10000	U	U	2.6 J	U	13 J
2,4,5-TP (Silvex)	1000	U	U	U	U	U

* value taken from 1:10000

U - non-detected compound

J - estimated value

OTHER ANALYSES WORK TABLE - TCLP METALS

Project: Central Steel and Drum

START PM: Ray Klimcsak

Sampling Date: 31 March 1998

Matrix / Phase	IDL	Solid	Solid	Solid	Solid	REGULATORY LEVEL
EPA ID No.		204403	204404	204415	204416	
Drum Number		D033	D066	D050	D056	
Lab ID No.	NA	887573	887608	887635	887637	
Dilution Factor	1	1	1	1	1	
Total Metals						
Arsenic	0.0031	U	U	0.0035 B	U	5.0
Barium	0.0001	0.437	0.107 B	0.0307 B	0.690	100
Cadmium	0.0003	0.0091	U	0.00055 B	0.00045 B	1.0
Chromium	0.0009	0.0033 B	0.0013 B	U	0.0265	5.0
Lead	0.0016	0.129	0.0677	0.0209	10.1	5.0
Mercury	0.0001	U	U	U	U	0.2
Selenium	0.0036	R	R	R	R	1.0
Silver	0.0007	U	U	U	U	5.0

All results presented in milligrams per liter (mg/L)

Shaded result denotes exceedance of regulatory limit

Inorganic Qualifiers
U - non-detected compound
B - analyte detected above the IDL but below the CRDL
J - estimated value
R - rejected compound
D/F - dilution factor

OTHER ANALYSES WORK TABLE - TCLP METALS (CONTINUED)

Project: Central Steel and Drum

START PM: Ray Klimcsak

Sampling Date: 31 March 1998

Matrix / Phase	IDL	Liquid	REGULATORY LEVEL
EPA ID No.		204403	
Drum Number		D033	
Lab ID No.	NA	887590	
Dilution Factor	1	25	
Total Metals			
Arsenic	0.0031	U	5.0
Barium	0.0001	0.0645 B	100
Cadmium	0.0003	0.0143 B	1.0
Chromium	0.0009	0.0255 B	5.0
Lead	0.0016	0.0516 B	5.0
Mercury	0.0001	U	0.2
Selenium	0.0036	0.188	1.0
Silver	0.0007	U	5.0

All results presented in milligrams per liter (mg/L)

Inorganic Qualifiers

U - non-detected compound

B - analyte detected above the IDL but below the CRDL

J - estimated value

R - rejected compound

D/F - dilution factor

RCRA CHARACTERISTICS (FLASH POINT) WORK TABLE

Project: Central Steel and Drum

Sampling Date: 31 March 1998

Matrix	Method Limit	Solid	Solid	Solid	Solid
Sample No.		204401	204402	204403	204404
Lab ID No.		887526	887554	887556	887607
Ignitability/ Flash Point	140°F (Upper Limit)	NWR	NWR	NWR	Flashed @ 108°F

Matrix	Method Limit	Solid	Solid	Solid	Solid
Sample No.		204411	204412	204414	204415
Lab ID No.		887623	887624	887628	887634
Ignitability/ Flash Point	140°F (Upper Limit)	Flashed @ 73.8°F	Flashed @ 66.6°F	NWR	Flashed @ 88.4°F

Matrix	Method Limit	Solid	Solid	REGULA-
Sample No.		204416	204417	TORY
Lab ID No.		887636	887638	LIMIT
Ignitability/ Flash Point	140°F (Upper Limit)	Flashed @ 66.6°F	Flashed @ 88.4°F	140°F

Note: shading denotes hazardous characteristic under RCRA

NWR - not within range

RCRA CHARACTERISTICS (FLASH POINT) WORK TABLE (continued)

Project: Central Steel and Drum

START PM: Ray Klimcsak

Sampling Date: 31 March 1998

Matrix	Method Limit	Liquid	Liquid	Liquid	Liquid
Sample No.		204401	204402	204403	204406
Lab ID No.		887540	887555	887572	887616
Ignitability/ Flash Point	140°F (Upper Limit)	NWR	NWR	NWR	NWR

Matrix	Method Limit	Liquid	Liquid	REGULA-
Sample No.		204407	204414	TORY
Lab ID No.		887618	887630	LIMIT
Ignitability/ Flash Point	140°F (Upper Limit)	NWR	NWR	140°F

Note: shading denotes hazardous characteristic under RCRA

NWR - not within range

CENTRAL STEEL & DRUM SITE
704-738 Doremus Ave.
Block 5074, Lot 1
Newark, Essex County
New Jersey 07105

Drum/Waste Pile Sampling Event
March 31, 1998

Attachment I

Sampling QA/QC Work Plan

SAMPLING QA/QC WORK PLAN

CENTRAL STEEL AND DRUM
NEWARK, ESSEX COUNTY, NEW JERSEY

Prepared by

Superfund Technical Assessment and Response Team
Roy F. Weston, Inc.
Federal Programs Division
Edison, New Jersey 08837

Prepared for

U.S. Environmental Protection Agency
Region II - Removal Action Branch
Edison, New Jersey 08837

DCN #: START-02-F-01667
TDD #: 02-97-09-0008-A
PCS #: 2247
EPA Contract No.: 68-W5-0019

Approved by:

START

_____ Date: March 5, 1998
Ray Klimcsak
START Project Manager

START

_____ Date: March 5, 1998
Joseph M. Soroka
START QC

EPA

_____ Date: March 5, 1998
Lou DiGuardia
On-Scene Coordinator

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LIST OF ATTACHMENTS

1.0 BACKGROUND

The site is located at 704-738 Doremus Avenue, Newark, New Jersey, 07105. The site is situated in an industrial area in the Iron Bound section of Newark and consists of a large manufacturing building located on 8.5 acres. Before 1952, an ink manufacturer occupied this site (International Printing Ink, Division of Interchemical Corporation, now part of Inmont Corp.). From 1952 to approximately 1991, Central Steel and Drum operated a drum reconditioning business. After vacating the property, a container shipping operation leased the property. According to NJDEP, the property has been abandoned since 1994.

The site is situated on filled wetland. On the south end of the property, bordering one side of the property, is an existing wetland where drums have been observed. To the west, along Doremus Avenue, are railroad tracks. The site, other than the main building, is gravel/weed covered filled vacant land.

2.0 DATA USE OBJECTIVES

The Region II, US EPA and Weston START team conducted a Removal Action under CERCLA guidance regulations, at the Central Steel and Drum site during the months of September 1997 - December 1997. During this time approximately 260, 55-gallon drums were sampled and characterized and later overpacked for disposal. In addition, waste ash debris from drums were consolidated into a pile. The objective of this drum sampling event is to provide additional analytical data to the US EPA Enforcement Group in their efforts to identify potential responsible parties. In addition, field screening for lead in the waste ash pile will be completed by the START team with the XRF unit.

3.0 QUALITY ASSURANCE OBJECTIVES

The overall Quality Assurance (QA) objective for chemical measurement data associated with this sampling event is to provide analytical results that are legally defensible in a court of law. The QA program will incorporate Quality Control (QC) procedures for field sampling, chain of custody, laboratory analyses, and reporting to assure generation of sound analytical results.

The EPA On-Scene Coordinator (OSC) has specified a Level 2 QA Objective (QA-2). Details of this QA level are provided in Section 6.0.

Table 1 details the QA objectives for the site, and Table 2 details the field sampling summary. The objective of this project/event applies to the following parameters:

TABLE 1:
Quality Assurance Objectives

QA Parameters	Matrix	Intended Use of Data	QA Objective
TCL, TAL, TCLP Corrositivity and Ignitability	Drum Liquids and/or Solids	Site assessment	QA-2
Lead	Ash Waste Pile	Site assessment	QA-1

A Field Sampling Summary is attached in Table 2 and a QA/QC Analysis and Objectives Summary is attached in Table 3. Section 4.2, Sampling Design, provides information on analyses to be performed on the individual soil samples.

4.0 APPROACH AND SAMPLING METHODOLOGIES

4.1 Sampling Equipment

All products (liquid/sludges) from the overpacked drums will be sampled using dedicated glass COLIWASA's and or a drum thieves. Soil/sediment samples will be collected with dedicated disposable trowels in order to avoid cross-contamination. XRF screening will be accomplished using the Spectrace Model 9000 XRF.

DRUM SAMPLING

All drums will be sampled using dedicated sampling equipment. A glass Composite Liquid Waste Sampler (COLIWASA) and/or drum thief will be used for sampling liquid drum contents. The thief will be inserted into the drum until a solid layer or the bottom of the drum is encountered. Upon equilibration of the sample in the tube, it will be capped by the sampler and removed for discharge into an appropriate sample container using gravity. The glass COLIWASA permits collection of a sample from the full depth of a drum and maintains it in the transfer tube until delivery to the sample container. The COLIWASA is designed to permit representative sampling of multi-phased liquid wastes. The drum sampling will be conducted as per EPA/ERT Drum Sampling: SOP# 2009 (Attachment B).

WASTE PILE SAMPLING

Disposable plastic scoops will be used to sample the ash waste pile. For samples at depth, a decontaminated auger may be required to advance the hole, then another decontaminated auger used for sample collection. For a sample core, thin-wall tube samplers or grain samples can be collected with a clean stainless steel spoon or trowel. All samples collected, except those for volatile organic analysis, should be placed into a Teflon-lined

TABLE 3:

QA/QC Analysis and Objectives Summary

Analytical Parameters	Matrix	Analytical Method Reference	QA/QC Quantitation Limits	Minimum Detection Limit
Full TCLP	Waste/Sludge	SW-846 Method NOS 1311 TCLP Extraction B240 (VOAs) B270 (BNAs) B080 (Pesticides) B150 (Herbicides) 6010/7000 (Metals)	QA-2	Analyte specific
TAL	Waste/Sludge	CLP SOW ILMO4.Q	QA-2	Analyte specific
Full TCL	Waste/Sludge	USEPA CLP SOW OLMO 3.1	QA-2	Analyte specific
RCRA Ignitability	Waste/Sludge	SW-846 Method No. 1020	QA-2	Analyte specific
RCRA Corrosivity	Waste/Sludge	SW-846 Method No. 9040	QA-2	Analyte specific
Lead	Soil	USEPA SOP 1713	QA-1	NA

or stainless steel pail and mixed thoroughly before being transferred to an appropriate sample container. The waste pile sampling will be conducted as per EPA/ERT Waste Pile Sampling: SOP # 2017 (Attachment C).

4.2 Sampling Design

The US EPA, Region II, Enforcement Group has provided OSC Lou DiGuardia with a list of 28 drums to be sampled. The drums are presently overpacked and staged within the warehouse on the property of the Central Steel and Drum site. Drums will be sampled with dedicated COLIWASA's and analyzed for the following parameters: TCL, TAL & TIC's (28 drums); TCLP (6 of the 28 drums); and Ignitability, and Corrositivity (11 of the 28 drums). All drums will be chosen by the OSC.

A maximum of 5 **ash waste pile samples** will be collected with dedicated scoops and analyzed for Lead. Prior to the sample collection, gravel, debris, or foliage will be removed from the sampling point. Samples will be collected from 0-6 inches in depth. All sample locations will be taken from within the ash waste pile, at points based on the determination of the OSC.

QA/QC samples will include the collection of one field duplicate and MS/MSD sample at a ratio of 1 per 20 samples. This sampling design is based on information currently available and may be modified on site in light of field screening results and other acquired information. All deviations from the sampling plan will be noted in the Sampling Trip Report.

FIELD XRF SCREENING

The Spectrace Model 9000 XRF will be used. XRF sample analyses and handling will be conducted in accordance with EPA/ERT SOP #1713 (Spectrace 9000 Field Portable X-Ray Fluorescence Operating Procedures), as well as the manufacturer's instruction manual. Both in-situ and prepared XRF cup method maybe used.

Low, medium and high concentration National Institute of Standards and Technology (NIST) certified Standard Reference Material (SRMs) - (SRMs: 2709, 2710, and 2711 respectively) - are measured periodically during the analyses. NIST standards are measured immediately following the initial energy calibration, resolution, and zero background check sequence, every 10 sample measurements and at the end of an analytical run. The standard deviation of the non-consecutive analysis of the low standard (NIST 2709) is used to calculate the Method Detection Limit (MDL) and the Method Quantitation Limit (MQL) for the Spectrace 9000 XRF analysis. The MDL is defined as being 3 times the standard deviation of the non-consecutive analyses of the low standard, whereas the MQL is defined as being 10 times the standard deviation of the non-consecutive analysis of the low standard.

An area for in-situ analysis will be prepared by removing large rocks and debris. The soil surface will be rendered flat and compact prior to analysis. The Spectrace 9000 probe will be held firmly on the ground to maximize instrument contact with the ground. The probe will not be moved during analysis. Analysis of water saturated soils will be avoided. A thin layer of 0.2-mil polypropylene XRF film may be mounted on the surface probe to minimize contamination.

Course-grained soil conditions or nuggets of contaminated material may preclude a truly representative sample and adversely affect the analysis results (typically by under reporting the target element). Such samples will be prepared before analysis. Preparation consistency is important to minimize variation in analytical results.

Based on the anticipated action levels, the XRF run times are 30 seconds for the Cd-119 source and 15 seconds each for the Fe-55 and AM-241 sources. Lead will be the focus of the XRF screening analysis. These run times should provide detection limits of approximately 100 ppm for each analyte. Based on the performance of the XRF spectrometer, these run times may be extended. XRF QA/QC will consist of one replicate measurement, one duplicate sample, and one NIST standard run for every ten samples or fraction thereof.

No confirmation sample will be obtained to confirm the XRF results. Therefore, the XRF results will be at a data quality level of QA-1.

4.3 Standard Operating Procedures (SOPs)

4.3.1 Sample Documentation

All sample documents will be completed legibly, in ink. Any corrections or revisions will be made by lining through the incorrect entry and by initialing the error.

FIELD LOGBOOK

The field logbook is essentially a descriptive notebook detailing site activities and observations so that an accurate account of field procedures can be reconstructed in the writer's absence. All entries will be dated and signed by the individuals making the entries, and should include (at a minimum) the following:

1. Site name and project number.
2. Name(s) of personnel on site.

3. Dates and times of all entries (military time preferred).
4. Descriptions of all site activities, site entry and exit times.
5. Noteworthy events and discussions.
6. Weather conditions.
7. Site observations.
8. Sample and sample location identification and description*.
9. Subcontractor information and names of on-site personnel.
10. Date and time of sample collections, along with chain of custody information.
11. Record of photographs.
12. Site sketches.

* The description of the sample location will be noted in such a manner as to allow the reader to reproduce the location in the field at a later date.

4.3.2 Sampling SOPs

Drum Sampling

Drum sampling will be conducted as per EPA/ERT Drum Sampling: SOP# 2009 (Attachment B).

Waste Pile Sampling

The waste pile sampling will be conducted as per EPA/ERT Waste Pile Sampling: SOP # 2017 (Attachment C).

XRF Sampling

The XRF sampling will be conducted as per EPA/ERT: SOP # 1713 (Attachment D).

4.3.3 Sample Handling and Shipment

Each of the sample jars will be sealed and labeled according to proper protocols. Jar labels will contain all required information including sample number, time and date of collection, analysis requested, sample description and preservative, if used. Sealed jars will be placed in large metal or plastic coolers, and padded with an absorbent material such as vermiculite. If the samples are to be shipped, all packaging will conform to IATA Transportation regulations for overnight carriers. All sample documents will be sealed in a plastic bag and affixed to the inside of each container. The lid will be sealed and affixed on at least two sides with seals so that any type of tampering is easily visible.

4.4 Analytical Methods/Test Procedures

Analytical methods to be utilized in the analyses of samples collected during this sampling event are detailed in Table 3 (Section 3.0).

Table 4
Proposed Schedule of Work

Start Date	Activity	End Date
9 March 1998	Drum Sampling and XRF Field Screening	9 March 1998

4.5 Disposal of PPE and Contaminated Sampling Materials

All PPE and sampling materials will be double bagged and sealed on site in a dedicated 85-gallon drum, which will later go out for disposal off-site.

5.0 PROJECT ORGANIZATION AND RESPONSIBILITIES

The OSC, Lou DiGurardia, will provide overall direction to the staff concerning project sampling needs, objectives and schedule. The START PM, Ray Klimcsak, will be the primary point of contact with the OSC. The START PM is responsible for the development and completion of the Sampling QA/QC Plan, project team organization, and supervision of all project tasks, including reporting and deliverables. The START PM will act as the Site QC Coordinator and will be responsible for ensuring field adherence to the Sampling QA/QC Plan and recording of any deviations. The START PM will also be the primary project team contact. In addition START member, Joe Soroka will be in charge of the XRF Field Screening.

The following personnel will conduct work on the assessment phase of this project:

Personnel	Affiliation	Responsibility
Ray Klimcsak	Region II START	Project Manager
Mike Mahnkopf	Region II START	Sampler
Joe Soroka	Region II START	XRF Screening
Swamy Ketha	Region II START	SMO

6.0 QUALITY ASSURANCE (QA) REQUIREMENTS

The following requirements apply to the respective QA Objectives and parameters identified in Section 3.0.

The QA Protocols for an Level 2 QA objective sampling event are applicable to all sample matrices and include:

1. Sample documentation in the form of field logbooks, appropriate field data sheets, and chain of custody records (chain of custody records are optional for field screening locations);

2. Calibration of all monitoring and/or field-portable analytical equipment prior to collection and analyses of samples with results and/or performance check procedures/methods summarized and documented in a field, personal, and/or instrument log notebook;

3. Field or laboratory determined method detection limits (MDLs) will be recorded along with corresponding analytical sample results, where appropriate;

4. Analytical holding times as determined from the time of sample collection through analysis. These will be documented in the field logbook or by the laboratory in the final data deliverable package;

5. Initial and continuous instrument calibration data;

6. QC blank results (rinsate, trip, method, preparation, instrument, etc.), as applicable;

7. Collection and analysis of blind field duplicate and MS/MSD QC samples to provide a quantitative measure of the analytical precision and accuracy, as applicable; and

8. Use of the following QC procedure for QC analyses and data validation:

    - Definitive identification - confirm the identification of analytes on 10% of the screened (field or laboratory) or 100% of the unscreened samples, via an EPA-approved method; provide documentation such as gas chromatograms, mass spectra, etc.

The QA Protocols for an Level 1 QA objective sampling event are applicable to all sample matrices and include:

1. Sample documentation in the form of field logbooks, appropriate field data sheets, and chain of custody records (chain of custody records are optional for field screening locations);

2. Calibration of all monitoring and/or field-portable analytical equipment prior to collection and analyses of samples with results and/or performance check procedures/methods summarized and documented in a field, personal, and/or instrument log notebook;

3. Field or laboratory determined method detection limits (MDLs) will be recorded along with corresponding analytical sample results, where appropriate.

7.0 DELIVERABLES

The Region II START Project Manager will maintain contact with the OSC to keep him informed of the technical and financial progress of this project. This communication will commence with the issuance of the work assignment and project scoping meeting. Activities under this project will be reported in status and trip reports and other deliverables (e.g., analytical reports, final reports) described herein.

The following deliverables will be provided under this project:

TRIP REPORT

A trip report will be prepared to provide a detailed accounting of what occurred during each sampling mobilization. The trip report will be prepared within one week of the last day of each sampling mobilization. Information will be provided on time of major events, dates, and personnel on site (including affiliations).

MAPS/FIGURES

Maps depicting site layout, contaminant source areas, and sample locations will be included in the trip report, as appropriate.

ANALYTICAL REPORT

An analytical report will be prepared for samples analyzed under this plan. Information regarding the analytical methods or procedures employed, sample results, QA/QC results, chain of custody documentation, laboratory correspondence, and raw data will be provided within this deliverable.

DATA REVIEW

A review of the data generated under this plan will be undertaken. The assessment of data acceptability or useability will be provided separately, or as part of the analytical report.

8.0 DATA VALIDATION

Data generated under this QA/QC Sampling Plan will be evaluated according to criteria contained in the Removal Program Data Validation Procedures that accompany OSWER Directive number 9360.4-1 and in accordance with Region II guidelines.

Laboratory analytical results will be assessed by the data reviewer for compliance with required precision, accuracy, completeness, representativeness, and sensitivity.

9.0 SYSTEM AUDIT

All provisions will be taken in the field and laboratory to ensure that any problems that may develop will be dealt with as quickly as possible to ensure the continuity of the sampling program. Any deviations from this sampling plan will be noted in the final report.

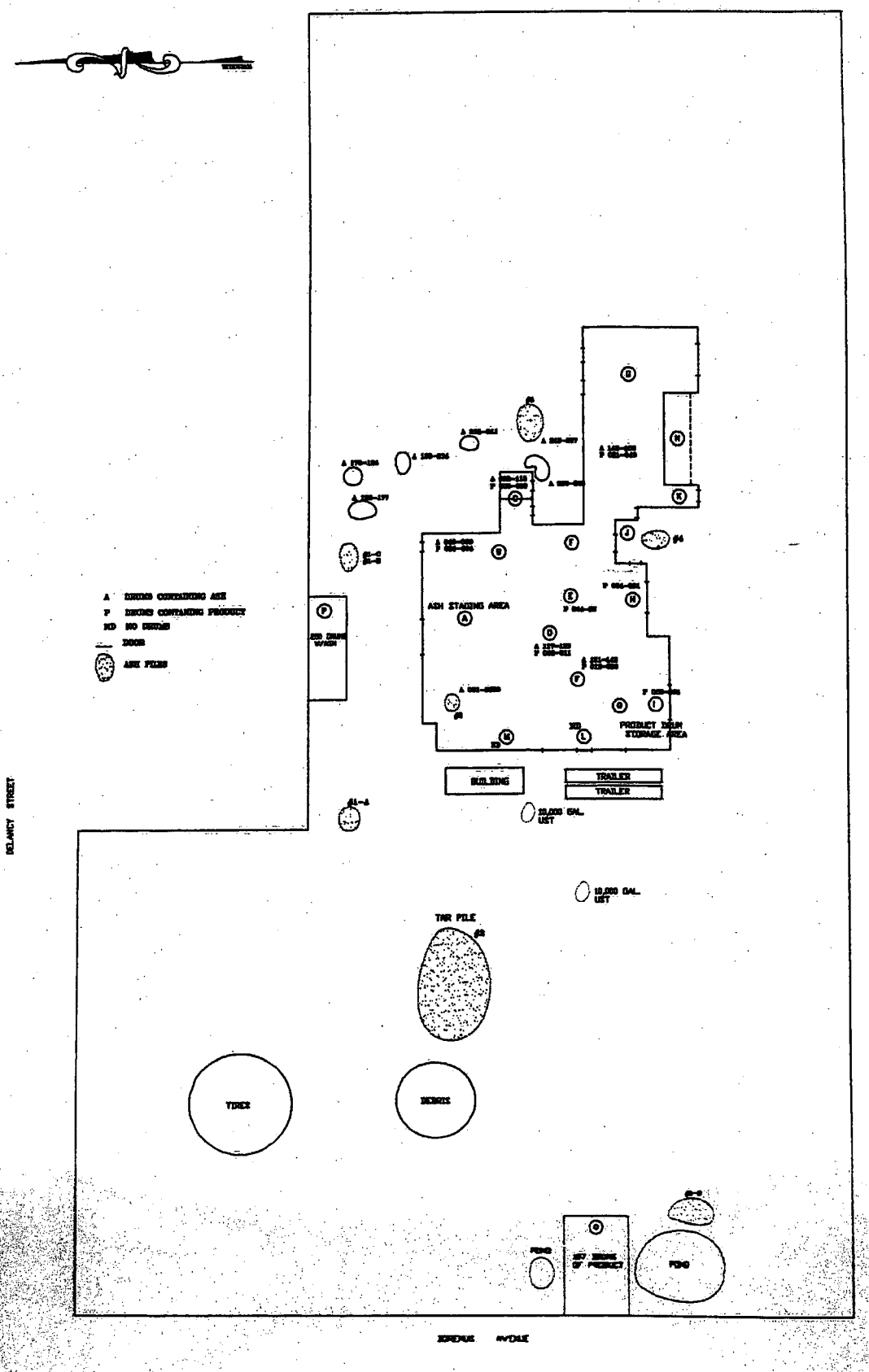
10.0 CORRECTIVE ACTION

All provisions will be taken in the field to ensure that any problems that may develop will be dealt with as quickly as possible to ensure the continuity of the project/sampling events. Any deviations from this sampling plan will be noted in the final report.

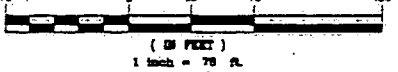
ATTACHMENT A

Figure 1

Site Location Map



GRAPHIC SCALE



(IN FEET)
1 inch = 75 ft.
(APPROXIMATE)

FIGURE 1 – DRUM LOCATIONS MAP
CENTRAL STEEL AND DRUM
NEWARK, NEW JERSEY
OCTOBER 1997

US EPA REMOVAL ACTION BRANCH
SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM
CONTRACT# 68-W5-0018

DRAWN BY : J. HAMPTON JR.

EPA TASK MONITOR: C. DeANGELIS

START PROJECT MANAGER: R. KLIMCSAK

WESTON Roy F. Weston, Inc.
FEDERAL PROGRAMS DIVISION

IN ASSOCIATION WITH PRC ENVIRONMENTAL MANAGEMENT, INC., C.C. JOHNSON & MALHOTRA, P.C., RESOURCE APPLICATIONS, INC., R.E. SARRIERA ASSOCIATES, AND GRB ENVIRONMENTAL SERVICES, INC.

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ATTACHMENT B

DRUM SAMPLING SOP #2009

2.0 DRUM SAMPLING: SOP #2009

2.1 SCOPE AND APPLICATION

The purpose of this Standard Operating Procedure (SOP) is to provide technical guidance on safe and cost-effective response actions at hazardous waste sites containing drums with unknown contents. Container contents are sampled and characterized for disposal, bulking, recycling, grouping, and/or classification purposes.

2.2 METHOD SUMMARY

Prior to sampling, drums must be inventoried, staged, and opened. An inventory entails recording visual qualities of each drum and any characteristics pertinent to the contents' classification. Staging involves the organization, and sometimes consolidation of drums which have similar wastes or characteristics. Opening of closed drums can be performed manually or remotely. Remote drum opening is recommended for worker safety. The most widely used method of sampling a drum involves the use of a glass thief. This method is quick, simple, relatively inexpensive, and requires no decontamination.

2.3 SAMPLE PRESERVATION, CONTAINERS, HANDLING, AND STORAGE

Samples collected from drums are considered waste samples. No preservatives should be added since there is a potential reaction of the sample with the preservative. Samples should, however, be cooled to 4°C and protected from sunlight in order to minimize any potential reaction due to the light sensitivity of the sample.

Sample bottles for collection of waste liquids, sludges, or solids are typically wide-mouth amber jars with Teflon-lined screw caps. Actual volume required for analysis should be determined in conjunction with the laboratory performing the analysis.

Follow these waste sample handling procedures:

1. Place sample container in two Ziploc plastic bags.
2. Place each bagged container in a 1-gallon covered can containing absorbent packing material. Place the lid on the can.
3. Mark the sample identification number on the outside of the can.
4. Place the marked cans in a cooler, and fill remaining space with absorbent packing material.
5. Fill out chain of custody form for each cooler, place in plastic, and affix to inside lid of cooler.
6. Secure and custody seal the lid of cooler.
7. Arrange for the appropriate transportation mode consistent with the type of hazardous waste involved.

2.4 INTERFERENCES AND POTENTIAL PROBLEMS

The practice of tapping drums to determine their contents is neither safe nor effective and should not be used if the drums are visually overpressurized or if shock-sensitive materials are suspected. A laser thermometer may be used instead.

Drums that have been overpressurized, to the extent that the head is swollen several inches above the level of the chime, should not be moved. A number of devices have been developed for venting critically swollen drums. One method that has proven to be effective is a tube and spear device. A light aluminum tube (3 meters long) is positioned at the vapor space of the drum. A rigid, hooking device attached to the tube goes over the chime and holds the tube securely in place. The spear is inserted in the tube and positioned against the drum wall. A sharp blow on the end of the spear drives the sharpened tip through the drum and the gas vents along the grooves. The venting should be done from behind a wall or barricade. This device can be cheaply and easily designed and constructed where needed. Once the pressure has been relieved, the bung can be removed and the drum sampled.

2.7 PROCEDURES

2.7.1 Preparation

1. Determine the extent of the sampling effort, the sampling methods to be employed, and which equipment and supplies are needed.

2. Obtain necessary sampling and monitoring equipment.

3. Decontaminate or preclean equipment and ensure that it is in working order.

4. Prepare scheduling and coordinate with staff, clients, and regulatory agency, if appropriate.

5. Perform a general site survey prior to site entry in accordance with the site-specific health and safety plan.

6. Use stakes, flagging, or buoys to identify and mark all sampling locations. If required, the proposed locations may be adjusted based on site access, property boundaries, and surface obstructions.

2.7.2 Drum Inspection

Appropriate procedures for handling drums depend on the contents. Thus, prior to any handling, drums should be visually inspected to gain as much information as possible about their contents. Those in charge of inspections should be on the look-out for:

- drum condition, corrosion, rust, and leaking contents
- symbols, words, or other markings on the drum indicating hazards (i.e., explosive, radioactive, toxic, flammable)
- signs that the drum is under pressure
- shock sensitivity

Monitor around the drums with radiation instruments, organic vapor monitors (OVA) and combustible gas indicators (CGI).

Classify the drums into categories, for instance:

- radioactive
- leaking/deteriorating
- bulging
- drums containing lab packs
- explosive/shock sensitive

All personnel should assume that unmarked drums contain hazardous materials until their contents have been categorized, and that labels on drums may not accurately describe their contents.

If it is presumed that there are buried drums on-site, geophysical investigation techniques such as magnetometry, ground penetrating radar, and metal detection can be employed in an attempt to determine depth and location of the drums. See ERT SOP #2159, General Surface Geophysics.

2.7.3 Drum Staging

Prior to sampling, the drums should be staged to allow easy access. Ideally, the staging area should be located just far enough from the drum opening area to prevent a chain reaction if one drum should explode or catch fire when opened.

While staging, physically separate the drums into the following categories: those containing liquids, those containing solids, lab packs, or gas cylinders, and those which are empty. This is done because the strategy for sampling and handling drums/containers in each of these categories will be different. This may be achieved by:

- Visual inspection of the drum and its labels, codes, etc. Solids and sludges are typically disposed of in open-top drums. Closed-head drums with a bung opening generally contain liquid.

- Visual inspection of the contents of the drum during sampling followed by restaging, if needed.

Once a drum has been excavated and any immediate hazard has been eliminated by overpacking or transferring the drum's contents, affix a numbered tag to the drum and transfer it to a staging area. Color-coded tags, labels, or bands should be used to mark similar waste types. Record a description of each drum, its condition, any unusual markings, and the location where it was buried or stored, on a drum data sheet (Appendix A). This data sheet becomes the principal

Since drums cannot be opened slowly with these tools, spray from drums is common requiring appropriate safety measures. Decontaminate the pick or spike after each drum is opened to avoid cross-contamination and/or adverse chemical reaction from incompatible materials.

Remote Drum Opening with a Backhoe Spike

Remotely operated drum opening tools are the safest available means of drum opening. Remote drum opening is slow, but is much safer compared to manual methods of opening.

Drums should be "staged" or placed in rows with adequate aisle space to allow ease in backhoe maneuvering. Once staged, the drums can be quickly opened by punching a hole in the drum head or lid with the spike.

The spike (Figure 4, Appendix B) should be decontaminated after each drum is opened to prevent cross-contamination. Even though some splash or spray may occur when this method is used, the operator of the backhoe can be protected by mounting a large shatter-resistant shield in front of the operator's cage. This, combined with the required level of personal protection gear, should be sufficient to protect the operator. Additional respiratory protection can be afforded by providing the operator with an on-board airline system.

Remote Drum Opening with Hydraulic Devices

A piercing device with a metal point is attached to the end of a hydraulic line and is pushed into the drum by hydraulic pressure (Figure 5, Appendix B). The piercing device can be attached so that the sampling hole can be made on either the side or the head of the drum. Some of the metal piercers are hollow or tube-like so that they can be left in place if desired and serve as a permanent tap or sampling port. The piercer is designed to establish a tight seal after penetrating the container.

Remote Drum Opening with Pneumatic Devices

Pneumatically-operated devices utilizing compressed air have been designed to remove drum bungs remotely (Figure 6, Appendix B).

2.7.5 Drum Sampling

After the drum has been opened, monitor headspace gases using an explosimeter and organic vapor analyzer. In most cases it is impossible to observe the contents of these sealed or partially sealed vessels. Since some layering or stratification is likely in any solution left undisturbed over time, take a sample that represents the entire depth of the vessel.

When sampling a previously sealed vessel, check for the presence of a bottom sludge. This is easily accomplished by measuring the depth to the apparent bottom, then comparing it to the known interior depth.

Glass Thief Sampler

The most widely used implement for sampling is a glass tube commonly referred to as a glass thief (Figure 7, Appendix B). This tool is simple, cost effective, quick, and collects a sample without having to decontaminate. Glass thieves are typically 6mm to 16mm I.D. and 48 inches long.

Procedures for using a glass thief are as follows:

1. Remove cover from sample container.
2. Insert glass tubing almost to the bottom of the drum or until a solid layer is encountered. About one foot of tubing should extend above the drum.
3. Allow the waste in the drum to reach its natural level in the tube.
4. Cap the top of the sampling tube with a tapered stopper or thumb, ensuring liquid does not come into contact with stopper.
5. Carefully remove the capped tube from the drum and insert the uncapped end in the sample container.
6. Release stopper and allow the glass thief to drain until the container is approximately 2/3 full.
7. Remove tube from the sample container, break it into pieces and place the pieces in the drum.

9. Package samples and complete necessary paperwork.

10. Transport sample to decontamination zone to prepare it for transport to the analytical laboratory.

2.8 CALCULATIONS

This section is not applicable to this SOP.

2.9 QUALITY ASSURANCE/ QUALITY CONTROL

The following general quality assurance procedures apply:

- Document all data on standard chain of custody forms, field data sheets, or within site logbooks.
- Operate all instrumentation in accordance with operating instructions as supplied by the manufacturer, unless otherwise specified in the work plan. Equipment checkout and calibration activities must occur prior to sampling/operation, and they must be documented.

2.10 DATA VALIDATION

This section is not applicable to this SOP.

2.11 HEALTH AND SAFETY

When working with potentially hazardous materials, follow U.S. EPA, OSHA, and specific health and safety procedures.

The opening of closed containers is one of the most hazardous site activities. Maximum efforts should be made to ensure the safety of the sampling team. Proper protective equipment and a general awareness of the possible dangers will minimize the risk inherent in sampling operations. Employing proper drum-opening techniques and equipment will also safeguard personnel. Use remote sampling equipment whenever feasible.

ATTACHMENT C

WASTE PILE SAMPLING SOP #2017

5.0 WASTE PILE SAMPLING: SOP #2017

5.1 SCOPE AND APPLICATION

The objective of this Standard Operating Procedure (SOP) is to outline the equipment and methods used in collecting representative samples from waste piles, sludges or other solid or liquid waste mixed with soil.

5.2 METHOD SUMMARY

Stainless steel shovels or scoops should be used to clear away surface material before samples are collected. For samples at depth, a decontaminated auger may be required to advance the hole, then another decontaminated auger used for sample collection. For a sample core, thin-wall tube samplers or grain samplers may be used. Near surfaces samples can be collected with a clean stainless steel spoon or trowel.

All samples collected, except those for volatile organic analysis, should be placed into a Teflon-lined or stainless steel pail and mixed thoroughly before being transferred to an appropriate sample container.

5.3 SAMPLE PRESERVATION, CONTAINERS, HANDLING, AND STORAGE

Chemical preservation of solids is generally not recommended. Refrigeration to 4°C is usually the best approach, supplemented by a minimal holding time.

Wide mouth glass containers with Teflon-lined caps are typically used for waste pile samples. Sample volume required is a function of the analytical requirements and should be specified in the work plan.

5.4 INTERFERENCES AND POTENTIAL PROBLEMS

There are several variables involved in waste sampling, including shape and size of piles, compactness, and structure of the waste material. Shape and size of waste material or waste piles vary greatly in areal extent and height. Since state and federal regulations often require a specified number of samples per volume of waste, size and shape must be used to calculate volume and to plan for the correct number of samples. Shape must also be accounted for when planning physical access to the sampling point and when selecting the appropriate equipment to successfully collect the sample at that location.

Material to be sampled may be homogeneous or heterogeneous. Homogeneous material resulting from known situations may not require an extensive sampling protocol. Heterogeneous and unknown wastes require more extensive sampling and analysis to ensure the different components are being represented.

The term "representative sample" is commonly used to denote a sample that has the properties and composition of the population from which it was collected, in the same proportions as found in the population. This can be misleading unless one is dealing with a homogenous waste from which one sample can represent the whole population.

The usual options for obtaining the most "representative sample" from waste piles are simple or stratified random sampling. Simple random sampling is the method of choice unless (1) there are known distinct strata; (2) one wants to prove or disprove that there are distinct strata; or (3) one is limited in the number of samples and desires to minimize the size of a "hot spot" that could go unsampled. If any of these conditions exist, stratified random sampling would be the better strategy.

This strategy, however, can be employed only if all points within the pile can be accessed. In such cases, the pile should be divided into a three-dimensional grid system; the grid sections assigned numbers; and the sampling points chosen using random-number tables or random-number generators. The only exceptions to this are situations in which representative samples cannot be collected safely or where the investigative team is trying to determine worst-case conditions.

precision demonstrated by sample team members. Use of a flat, pointed mason trowel to cut a block of the desired material can be helpful when undisturbed profiles are required. A stainless steel scoop, lab spoon, or plastic spoon will suffice in most other applications. Care should be exercised to avoid the use of devices plated with chrome or other materials. Plating is particularly common with implements such as garden trowels.

Use the following procedure to collect surface samples:

1. Carefully remove the top layer of material to the desired sample depth with a precleaned spade.

2. Using a precleaned stainless steel scoop, plastic spoon, or trowel, remove and discard a thin layer of material from the area which came in contact with the spade.

3. If volatile organic analysis is to be performed, transfer the sample into an appropriate, labeled sample container with a stainless steel lab spoon, plastic lab spoon, or equivalent and secure the cap tightly. Place the remainder of the sample into a stainless steel, plastic, or other appropriate homogenization container, and mix thoroughly to obtain a homogenous sample representative of the entire sampling interval. Then, either place the sample into appropriate, labeled containers and secure the caps tightly; or, if composite samples are to be collected, place a sample from another sampling interval into the homogenization container and mix thoroughly. When compositing is complete, place the sample into appropriate, labeled containers and secure the caps tightly.

SAMPLING WITH AUGERS AND THIN-WALL TUBE SAMPLERS

This system consists of an auger, a series of extensions, a "T" handle, and a thin-wall tube sampler (Figure 13, Appendix B). The auger is used to bore a hole to a desired sampling depth, and is then withdrawn. The sample may be collected directly from the auger. If a core sample is to be collected, the auger tip is then replaced with a thin-wall tube sampler. The system is then lowered down the borehole, and driven into the pile at the completion depth. The system is withdrawn and the core collected from the thin-wall tube sampler.

Several augers are available. These include: bucket, continuous flight (screw), and post hole augers. Bucket augers are better for direct sample recovery since they provide a large volume of sample in a short time. When continuous flight augers are used, the sample can be collected directly from the flights, which are usually at 5-foot intervals. The continuous flight augers are satisfactory for use when a composite of the complete waste pile column is desired. Post hole augers have limited utility for sample collection as they are designed to cut through fibrous, rooted, swampy areas.

Use the following procedure for collecting waste pile samples with the auger:

1. Attach the auger bit to a drill rod extension, and attach the "T" handle to the drill rod.

2. Clear the area to be sampled of any surface debris. It may be advisable to remove the first 3 to 6 inches of surface material for an area approximately 6 inches in radius around the drilling location.

3. Begin augering, periodically removing and depositing accumulated materials onto a plastic sheet spread near the hole. This prevents accidental brushing of loose material back down the borehole when removing the auger or adding drill rods. It also facilitates refilling the hole, and avoids possible contamination of the surrounding area.

4. After reaching the desired depth, slowly and carefully remove the auger from boring. When sampling directly from the auger, collect sample after the auger is removed from boring and proceed to Step 10.

5. Remove auger tip from drill rods and replace with a precleaned thin-wall tube sampler. Install proper cutting tip.

6. Carefully lower the tube sampler down the borehole. Gradually force the tube sampler into the pile. Care should be taken to avoid scraping the borehole sides. Avoid hammering the drill rods to facilitate coring as the vibrations may cause the boring walls to collapse.

2. Rotate the sampler inner tube into the open position.

3. Wiggle the sampler a few times to allow material to enter the open slots.

4. With the sampler in the closed position, withdraw it from the material being sampled.

5. Place the sampler in a horizontal position with the slots facing upward.

6. Rotate the outer tube and slide it away from the inner tube.

7. If volatile organic analysis is to be performed, transfer the sample into an appropriate, labeled sample container with a stainless steel lab spoon, plastic lab spoon, or equivalent and secure the cap tightly. Place the remainder of the sample into a stainless steel, plastic, or other appropriate homogenization container, and mix thoroughly to obtain a homogenous sample representative of the entire sampling interval. Then, either place the sample into appropriate, labeled containers and secure the caps tightly; or, if composite samples are to be collected, place a sample from another sampling interval into the homogenization container and mix thoroughly. When compositing is complete, place the sample into appropriate, labeled containers and secure the caps tightly.

5.8 CALCULATIONS

This section is not applicable to this SOP.

5.9 QUALITY ASSURANCE/ QUALITY CONTROL

There are no specific quality assurance activities which apply to the implementation of these procedures. However, the following QA procedures apply:

- All data must be documented on field data sheets or within site logbooks.

- All instrumentation must be operated in accordance with operating instructions as supplied by the manufacturer, unless otherwise specified in the work plan. Equipment checkout and calibration activities must occur prior to sampling/operation, and they must be documented.

5.10 DATA VALIDATION

This section is not applicable to this SOP.

5.11 HEALTH AND SAFETY

When working with potentially hazardous materials, follow U.S. EPA, OSHA and specific health and safety procedures.

ATTACHMENT D

XRF, EPA/ERT SOP #1713

CENTRAL STEEL & DRUM SITE
704-738 Doremus Ave.
Block 5074, Lot 1
Newark, Essex County
New Jersey 07105

Drum/Waste Pile Sampling Event
March 31, 1998

Attachment II

Trip Report

SAMPLING TRIP REPORT

SITE NAME: Central Steel and Drum Site
DCN #: START-02-F-01764
TDD #: 02-97-09-0008A

EPA I.D. NO.: RA

SAMPLING DATES: March 31, 1998

1. Site Location: Refer to Figure 1

2. Sample Locations: Refer to Figure 2

3. Sample Descriptions: Refer to Table 1& 2

4. Laboratories Receiving Samples:

Sample Type	Name and Address of Laboratory
TCL TAL TCLP VOA TCLP Non-Volitile TCLP Metals Flash Point	Compuchem Labatories, Inc. 501 Madison Ave. Cary, NC 27513

5. Sample Dispatch Data:

Twelve drum samples for TCL, TAL,full TCLP and flash point analyses, were shipped to the Compuchem Labatories on March 31, 1998 via Federal Express (Airbill No. 4811729333).

6. On-Site Personnel:

Name	Company	Duties on Site
Louis DiGuardia	U.S. EPA Region II	Task Monitor
Ray Klimcsak	Region II START	Project Manager
Mike Mahnkopf	Region II START	Site QA/QC Officer
		Site Health and Safety Coordinator
Bruce Lin	Region II START	Sampler
Dave Adams	Region II START	Sampler

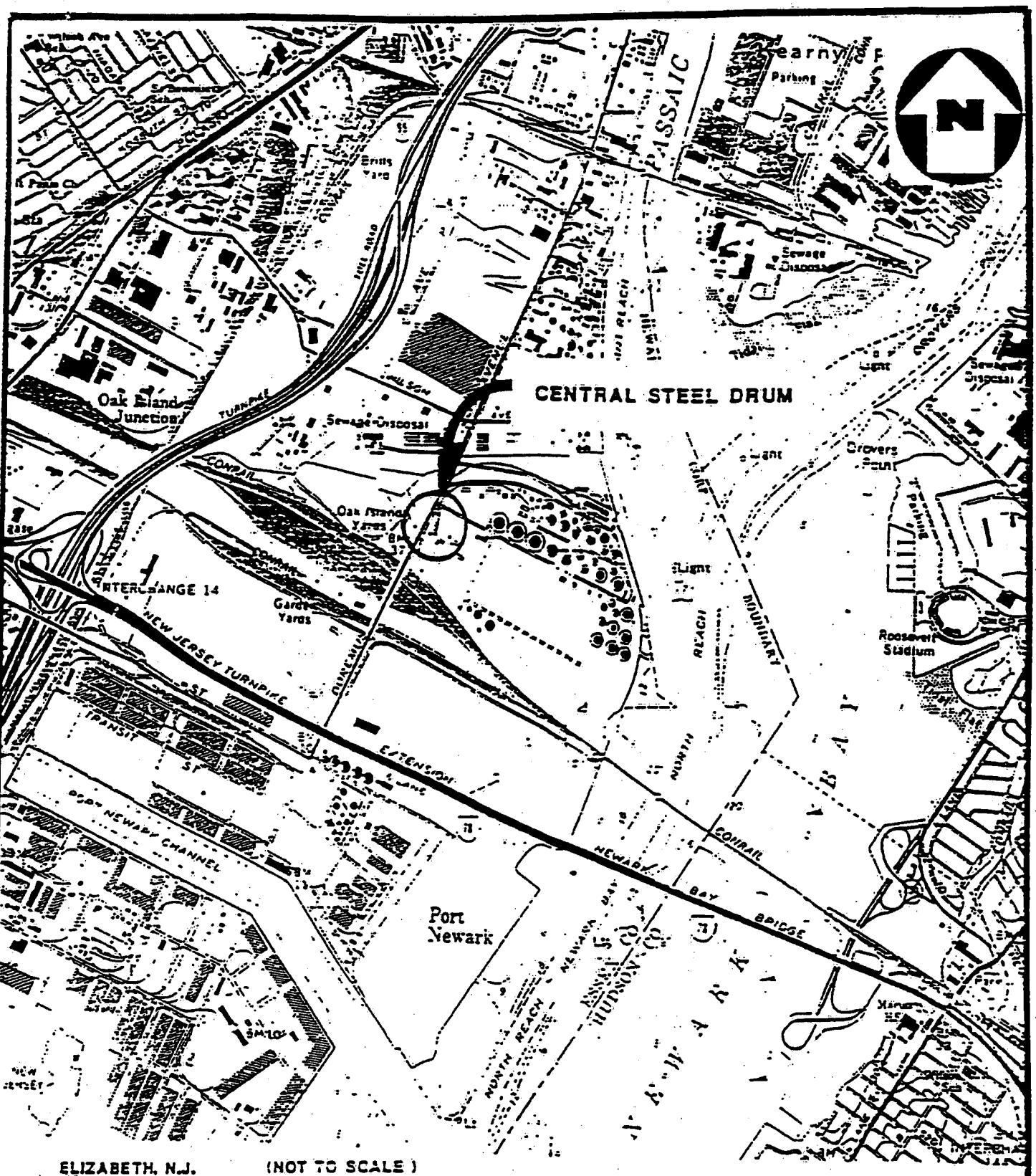
7. Additional Comments:

On March 31, 1998, the Region II Superfund Technical Assessment and Response Team (START), collected drum samples from the Site. All samples collected were to be analyzed for Target Analyte List (TAL), TCL, full TCLP and flash point parameters through private laboratories. The samples were shipped to a private laboratory in Cary, NC. Chain of Custody Records are presented in Attachment 1

8. Report Prepared by: _____ Date: 4/13/98
Ray Klimcsak, START

9. Report Approved by: _____ Date: 4/16/98
Bruce Lin, START

SITE LOCATION AND SAMPLING LOCATION MAPS



Source: Halliburton NUS

WESTON MANAGERS/DESIGNERS/CONSULTANTS Roy F. Weston, Inc. FEDERAL PROGRAMS DIVISION	EPA PM G. DeAngelis	Central Steel Drum Newark, New Jersey
IN ASSOCIATION WITH RESOURCE APPLICATION Inc. C.C. JOHNSON & MALHOTRA, P.C., R.E. SARRIERA ASSOCIATES, PRC ENVIRONMENTAL MANAGEMENT, AND GRS ENVIRONMENTAL SERVICES, INC.	START PM R. Klimcsak	Figure 1: Site Location

TABLE 1
SAMPLE DESCRIPTIONS
CENTRAL STEEL AND DRUM SITE
NEWARK, MIDDLESEX, NEW JERSEY
SAMPLING DATE: 3/31/98

DRUM NUMBER	EPA ID NUMBER	TCL	TAL	FULL TCLP	RCRA Fl. PT.	TIME	COMMENTS
D025	204401	✓	✓		✓	0930	
D026	204402	✓	✓		✓	0935	
D033	204403	✓	✓	✓	✓	0940	MS/MSD
D066	204404	✓	✓	✓	✓	0945	
D067	204405	✓	✓			0950	
D068	204406	✓	✓		✓	0955	
D368	204407	✓	✓		✓	0955	Duplicate of D068
D088	204408	✓	✓			1000	
D005	204409	✓	✓			1005	
D008	204410	✓	✓			1010	
D009	204411	✓	✓			1015	MS/MSD
D010	204412	✓	✓		✓	1020	
D011	204413	✓	✓			1025	
D027	204414	✓	✓		✓	1030	
D050	204415	✓	✓	✓	✓	1035	
D056	204416	✓	✓	✓	✓	1040	
D310	204417	✓	✓		✓	1020	Duplicate of D010
D061	204418	✓	✓			1050	MS/MSD
D260	204419	✓	✓			1055	
D361	204420	✓	✓			1050	Duplicate of D061

ATTACHMENT 1

CHAIN OF CUSTODY RECORDS

No. 1457

No. 10919

WESTON MANAGERS ENGINEERS CONSULTANTS

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM
EPA CONTRACT 68-W8-0019
Phone: 908-225-6116 Fax: 908-225-7037

1. Surface Water	1. HCl
2. Ground Water	2. HNO3
3. Leachate	3. Na2SO4
4. Rinsate	4. H2SO4
5. Soil/Sediment	5. Other (Specify)
6. Oil	6. Ice Only
7. Waste	N. Not Preserved
8. Other (Specify)	* See Comments

and verbal and written results to: Roy F. Weston, Inc., USEPA Region II START
Suite 201, 1090 King Georges Post Road, Edison, New Jersey 08837-3703
Attention: Smita Sumbaly, START Analytical Coordinator

Sample Number	Sample Collection MM/DD/YY/Time	Sample Matrix (Enter box #)	Conc. Low-L Med-M High-H	Sample Type Comp-C Grab-G	Sample Preserv. (Enter box #)	RAS ANALYSES VOA	BNA	PEST/PCB	TAL/CN	RCRA ANALYSES XRF	COR	REAC	OTHER
204401	3/31/98 0930	7	M	G	6	X	X	X	X	X	X		Fl. pt.
204402	0935					X	X	X	X	X	X		Fl. pt
204403	0940					X	X	X	X	X	X		Fl. pt; Full TCLP
204404	0945					X	X	X	X	X	X		Flpt; Full TCLP
204405	0950					X	X	X	X	X			
204406	0955					X	X	X	X	X	X		Fl. pt
204407	0955					X	X	X	X	X	X		Fl. pt
204408	1000					X	X	X	X	X			
204409	1005					X	X	X	X	X			
204410	1010					X	X	X	X	X			
204411	1015	↓	↓	↓	↓	X	X	X	X	X			

Comments:
(1) TCL, TAL, Fl. pt only Sample 204403 MS/MSD
(2) Sample 204411 MS/MSD
(3) For Bilayered Samples, Analyze both layers

Person Assuming Responsibility for Sample: M. Mahoney — Time: 1600 — Date (MM/DD/YY): 3/31/98

Sample Number	Relinquished By:	Time	Date	Received By:	Reason for Change of Custody
ALL	M. Mahoney	1800	3/31/98		Transfer to CAS

Roy F. Weston, Inc.
FEDERAL PROGRAMS DIVISION
In Association with Resource Applications, Inc., R.E. Sarriera Associates, PRC Environmental Management, C.C. Johnson & Malhotra, P.C., and GRB Environmental Services, Inc.

(4) Sample 204404 MS/MSD - Full TCLP only

EP No.: 1457

D No.: 90919

CHAIN OF CUSTODY RECORD

WESTON MANAGERS DESIGNERS CONSULTANTS

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM
EPA CONTRACT 68-W5-0019
Phone: 908-225-6116 Fax: 908-225-7037

1. Surface Water	1. HCl
2. Ground Water	2. HNO3
3. Leachate	3. Na2SO4
4. Rinsate	4. H2SO4
5. Soil/Sediment	5. Other (Specify)
6. Oil	6. Ice Only
7. Waste	N. Not Preserved
8. Other (Specify)	* See Comments

send verbal and written results to: Roy F. Weston, Inc., USEPA Region II START
Suite 201, 1090 King Georges Post Road, Edison, New Jersey 08837-3703
Attention: Smita Sumbaly, START Analytical Coordinator

Sample Number	Sample Collection MM/DD/YY/Time	Sample Matrix (Enter box #)	Conc. Low-L Med-M High-H	Sample Type Comp-C Grab-G	Sample Preserv. (Enter box #)	RAS ANALYSIS: VOA	BNA	PEST	PCBs	TAL	CN	RCRA ANALYSIS: XRF	COR	REAC	OTHER
204412	3/31/93 1000	7	L/M	G	6	X	X	X	X	X	X				Fl, pt.
204413	1025					X	X	X	X	X					
204414	1030					X	X	X	X	X	X				Fl. pt.
204415	1035					X	X	X	X	X	X				Fl. pt; Full TCL
204416	1040					X	X	X	X	X	X				Fl pt; Full TCL
204417	1020					X	X	X	X	X	X				Fl. pt
204418	1050					X	X	X	X	X					
204419	1055					X	X	X	X	X					
204420	↓ 1050	↓	↓	↓	↓	X	X	X	X	X					

Comments: (1) Sample 204418 MS/MSD
(2) Bilayered Samples - Analyze both layers

Person Assuming Responsibility for Sample:	Time	Date (MM/DD/YY)
M. Mahoney	1600	3/31/93

Sample Number	Relinquished By:	Time	Date	Received By:	Reason for Change of Custody
ALL	M. Mahoney	1800	3/31/93		Transfer to Lab

Sample Number	Relinquished By:	Time	Date	Received By:	Reason for Change of Custody

Sample Number	Relinquished By:	Time	Date	Received By:	Reason for Change of Custody

Roy F. Weston, Inc.
FEDERAL PROGRAMS DIVISION
In Association with Resource Applications, Inc., R.E. Sarriera Associates, PRC Environmental Management, C.C. Johnson & Malhotra, P.C., and GRB Environmental Services, Inc.

Precautionary Measures Against Hidden Hazards in Laboratory Samples

Notice to Laboratory Personnel

Background

Under the authority of Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) of 1980, Section 311 of the Clean Water Act, and Subtitle I of the Resource Conservation and Recovery Act (RCRA), EPA has been delegated the responsibility to undertake response actions with respect to the release or potential release of oil, petroleum, or hazardous substances that pose a substantial threat to human health or welfare, or the environment. In addition, EPA provides technical assistance to help mitigate endangerment of the public health, welfare or environment during other emergencies and natural disasters.

EPA's successful implementation of these emergency response action responsibilities requires that technical support capabilities be provided in the form of a contracted Superfund Technical Assessment and Response Team (START) for each EPA Region. The WESTON START Contract 68-W5-0019 provides support to EPA Region II.

Hazard Communication

The samples which accompany this notice have been shipped to your laboratory for analysis in accordance with applicable D.O.T. or IATA Regulations and were collected by the WESTON START and were tentatively designated by the field response team as either environmental or hazardous material samples.

In general, *Environmental Samples* are collected from streams, farm ponds, small lakes, wells, and off-site soils that are not reasonably expected to be contaminated with hazardous materials. Samples of on-site soils or water, and materials collected from drums, bulk storage tanks, obviously contaminated ponds, impoundments, lagoons, pools, and leachates from hazardous waste sites are considered *Hazardous Samples*. Samples which are obtained from a known radioactive material contamination site or which demonstrate beta or gamma activity greater than three times average background as scanned with a Geiger-Mueller radiation survey meter are considered *Radioactive Samples*.

The samples which accompany this notice have been tentatively classified by the field response team as:

X Environmental ____ Hazardous ____ Comb. (Envir.& Haz.) ____ Radioactive

The field team which collected the samples used the following Level(s) of personal protection as designated by EPA and OSHA conventions to provide protection against possible radiological or chemical exposure:

____ Level A ____ Level B X Level C ____ Level D

This information is intended for use as a guide for the safe handling of these laboratory samples in accordance with EPA and OSHA regulations. The sample classification(s) and Levels of personal protection used by the WESTON START are not represented to be, nor are they adequate or applicable in all situations, nor are they intended to serve as substitutes for professional/personal judgement.

This form was prepared by: M. Mahoney Date 3/31/98

Analytical Services TDD No. _____ Date __/__/__

WESTON Office: Region II START, Edison, NJ Phone: 908-225-6116 FAX: 908-225-7037

Laboratory Name: Compu Chem

/Hazcom for Laboratory Personnel/ To be attached to each Chain-of-Custody Form

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: CONRAIL Steel 3 Drum

Collector(s): MM/DA Affiliation: START

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: Drum THIEF

LDMS CODE

DATA BASE CODE

STA. TYPE CODE

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
Solvent Extract Other ( )

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	**Cleaning Procedure**	**Landfill**	**Industrial**
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	(Drum)	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	**Solvent Rinse:**	Depth:	Drum
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		**Municipal Treatment**
Paper Cap	Methylene Chloride	**Storage Tank**	Influent
(Teflon Cap)	Other (Specify):	Top	Effluent-Cl
Foil Cap		Middle	Effluent-Non Cl
Other		Bottom	Sludge
		Truck	Ambient
Preservation		Drum	Lake
Acid		Tank	Stream
Solvent		Other	Pond
Chemical			Ocean
(Wet Ice)		**Wells**	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

Drum # D0025
Black/Brown oil - 50%
clear liquid - 50%

Remarks:

Analysis
Full TCL
TAL
~~TCL~~ RCRA Fl. Pt.

Samples to:

Bact	Bio	Chem	Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number: 204401

Type of Sample: (Grab) Composite

	Time	Space

Collection (Ending) Date

Yr	Mo	Day
91 8	03	31

Ending Time (24 Hr): 0930

Beginning Date

Yr	Mo	Day

Beginning Time (24 Hr)

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split

☐ Yes ☐ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name CLEANUP STUDY & DRUM

Collector(s) MM / DA Affiliation START

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other DRUM THIEF

LDMS CODE

DATA BASE CODE

STA. TYPE CODE

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
Solvent Extract Other ( )

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	Cleaning Procedure	Landfill	Industrial
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	(Drum)	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	Solvent Rinse:	Depth:	Drum
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		Municipal Treatment
Paper Cap	Methylene Chloride	Storage Tank	Influent
(Teflon Cap)	Other (Specify):	Top	Effluent-Cl
Foil Cap		Middle	Effluent-Non Cl
Other		Bottom	Sludge
		Truck	Ambient
Preservation		Drum	Lake
Acid		Tank	Stream
Solvent		Other	Pond
Chemical			Ocean
(Wet Ice)		Wells	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

DRUM # D0026
BLACK brown oil - 40%
clear liquid - 60%

Remarks:

ANALYSIS
TCL, TAL
RCRA FULL

Samples to:

Bact	Bio	Chem	Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number: 204402

Type of Sample: (Grab) Composite — Time | Space

Collection (Ending) Date: Yr 91 Mo 03 Day 31

Ending Time (24 Hr): 0935

Beginning Date: Yr Mo Day

Beginning Time (24 Hr)

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split

☐ Yes ☐ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name CoATING Steel + Drum

Collector(s) MM / DA Affiliation START

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other Drum THIEF

LDMS CODE

DATA BASE CODE

STA. TYPE CODE

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
Solvent Extract Other ( )

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	Cleaning Procedure	Landfill	Industrial
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	(Drum)	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	Solvent Rinse:	Depth:	Drum
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		Municipal Treatment
Paper Cap	Methylene Chloride	Storage Tank	Influent
(Teflon Cap)	Other (Specify):	Top	Effluent-Cl
Foil Cap		Middle	Effluent-Non Cl
Other		Bottom	Sludge
		Truck	Ambient
Preservation		Drum	Lake
Acid		Tank	Stream
Solvent		Other	Pond
Chemical			Ocean
(Wet Ice)		Wells	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

Drum #P0033
Black brown light oil - 50%
clear liquid - 50%

Remarks:

Analysis
TCL, TAL, ✓ MS/MSD only
RCRA EP/MS ✓
Full TCLP
MM

Form: FTB RPD-11-82-2

Samples to:

Bact	Bio	Chem	Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number: 204403

Type of Sample: (Grab) Composite

	Time	Space

Collection (Ending) Date: Yr 91 8 Mo 03 Day 31

Ending Time (24 Hr): 0940

Beginning Date: Yr Mo Day

Beginning Time (24 Hr)

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split

☐ Yes ☐ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: CENTRAL SEED & DRUM

Collector(s): MM / DA Affiliation: STAT

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: DRUM THIEF

LDMS CODE

DATA BASE CODE

STA. TYPE CODE

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
Solvent Extract Other ( )

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)

Container	Cleaning Procedure	Preservation
(Glass Jar)	Detergent Wash	Acid
Plastic Jar	Water Rinse	Solvent
Metal	Acid Rinse	Chemical
POA Vial	Solvent Rinse:	(Wet Ice)
Cubitainer	Acetone	Dry Ice
Acetate Core	Hexane	Ambient
Paper Cap	Methylene Chloride	Other
(Teflon Cap)	Other (Specify):	
Foil Cap		
Other		

Sample Source Type (Circle)

Landfill	Industrial
Leachate	Effluent
(Drum)	Process Stream
Test Well	Holding Pond
Depth:	Drum
Other:	Waste Pile
Storage Tank	Municipal Treatment
Top	Influent
Middle	Effluent-Cl
Bottom	Effluent-Non Cl
Truck	Sludge
Drum	Ambient
Tank	Lake
Other	Stream
Wells	Pond
Monitoring	Ocean
Production	Estuary
Drinking	
Private	

Sample Location Description:

Drum # D0066

Black / brown oil sludge

Remarks:

ANALYSIS

TCL CTAL

RCRA PL. IT

FULL TCLP > MS/MSD only

Samples to:

Bact	Bio	Chem	Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number: 204404

Type of Sample: (Grab) Composite

	Time	Space

Collection (Ending) Date: Yr 91 8 Mo 03 Day 31

Ending Time (24 Hr): 0945

Beginning Date: Yr Mo Day

Beginning Time (24 Hr)

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split

☐ Yes ☐ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: Control Steel & Drum

Collector(s): MM / DA Affiliation: START

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: Drum Thief

LDMS CODE

DATA BASE CODE

STA. TYPE CODE

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
Solvent Extract Other ( )

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	Cleaning Procedure	Landfill	Industrial
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	(Drum)	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	Solvent Rinse:	Depth:	Drum
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		Municipal Treatment
Paper Cap	Methylene Chloride	Storage Tank	Influent
(Teflon Cap)	Other (Specify):	Top	Effluent-Cl
Foil Cap		Middle	Effluent-Non Cl
Other		Bottom	Sludge
Preservation		Truck	Ambient
Acid		Drum	Lake
Solvent		Tank	Stream
Chemical		Other	Pond
(Wet Ice)		Wells	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

~~St~~ Drum # D0067

Black Oil Sludge

Remarks:

Analysis

TCL / TAL

Samples to:

Bact	Bio	Chem	Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number: 204405

Type of Sample

Grab	Composite	
	Time	Space

Collection (Ending) Date

Yr	Mo	Day
91	03	31

Ending Time (24 Hr): 0950

Beginning Date

Yr	Mo	Day

Beginning Time (24 Hr)

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split

☐ Yes ☐ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: Centre Steel & Drum

Collector(s): MM/DA Affiliation: START

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: Drum Thief

LDMS CODE

DATA BASE CODE

STA. TYPE CODE

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
Solvent Extract Other ( )

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	**Cleaning Procedure**	**Landfill**	**Industrial**
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	(Drum)	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	**Solvent Rinse:**	Depth:	Drum
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		**Municipal Treatment**
Paper Cap	Methylene Chloride	**Storage Tank**	Influent
(Teflon Cap)	Other (Specify):	Top	Effluent-Cl
Foil Cap		Middle	Effluent-Non Cl
Other		Bottom	Sludge
		Truck	Ambient
Preservation		Drum	Lake
Acid		Tank	Stream
Solvent		Other	Pond
Chemical			Ocean
(Wet Ice)		**Wells**	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

Drum # D0068
Light Brown oil - 80%
clear oil - 20%

Remarks:

Analysis ✓
TCL, TAL,
RCRA Fl. Pt.

Samples to:

Bact	Bio	Chem	Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number: 204406

Type of Sample: (Grab) Composite — Time | Space

Collection (Ending) Date: Yr 98 Mo 03 Day 31

Ending Time (24 Hr): 0955

Beginning Date: Yr Mo Day

Beginning Time (24 Hr)

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split

☐ Yes ☐ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name Central Steel & Drum

Collector(s) MM/DA Affiliation START

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other Drum Thief

LDMS CODE

DATA BASE CODE

STA. TYPE CODE

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
Solvent Extract Other ( )

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	Cleaning Procedure	Landfill	Industrial
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	(Drum)	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	Solvent Rinse:	Depth:	Drum
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		Municipal Treatment
Paper Cap	Methylene Chloride	Storage Tank	Influent
(Teflon Cap)	Other (Specify):	Top	Effluent-Cl
Foil Cap		Middle	Effluent-Non Cl
Other		Bottom	Sludge
		Truck	Ambient
Preservation		Drum	Lake
Acid		Tank	Stream
Solvent		Other	Pond
Chemical			Ocean
(Wet Ice)		Wells	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

Drum # D00368 - Drum # D00368

SAME AS D00368

Remarks:

Analysis ✓

TCL, TAL

RCRA Fl. pt

Samples to:

Bact	Bio	Chem	Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number 204407

Type of Sample

(Grab) Composite

	Time	Space

Collection (Ending) Date

Yr	Mo	Day
91	03	31

Ending Time (24 Hr) 0955

Beginning Date

Yr	Mo	Day

Beginning Time (24 Hr)

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split

☐ Yes ☐ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: CONTRACT Steel 5 Drum

Collector(s): MM / DA Affiliation: START

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: Drum THIEF

LDMS CODE

DATA BASE CODE

STA. TYPE CODE

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
Solvent Extract Other ( )

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	Cleaning Procedure	Landfill	Industrial
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	(Drum)	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	Solvent Rinse:	Depth:	Drum
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		Municipal Treatment
Paper Cap	Methylene Chloride	Storage Tank	Influent
(Teflon Cap)	Other (Specify):	Top	Effluent-Cl
Foil Cap		Middle	Effluent-Non Cl
Other		Bottom	Sludge
		Truck	Ambient
Preservation		Drum	Lake
Acid		Tank	Stream
Solvent		Other	Pond
Chemical			Ocean
(Wet Ice)		Wells	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

DRUM # D288 ✓

Brown oil - 50%

Clear liquid - 50%

Remarks:

ANALYSIS

TCL, TAL

Samples to:

Bact	Bio	Chem	Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number: 204408

Type of Sample

Grab	Composite	
	Time	Space

Collection (Ending) Date

Yr	Mo	Day
9 8	0 3	3 1

Ending Time (24 Hr): 1000

Beginning Date

Yr	Mo	Day

Beginning Time (24 Hr)

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split

☐ Yes ☐ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: Control Steel & Drum

Collector(s): MM / DA Affiliation: START

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: Class Thief

LDMS CODE

DATA BASE CODE

STA. TYPE CODE

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
Solvent Extract Other ( )

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	**Cleaning Procedure**	**Landfill**	**Industrial**
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	(Drum)	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	**Solvent Rinse:**	Depth:	Drum
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		**Municipal Treatment**
Paper Cap	Methylene Chloride	**Storage Tank**	Influent
(Teflon Cap)	Other (Specify):	Top	Effluent-Cl
Foil Cap		Middle	Effluent-Non Cl
Other		Bottom	Sludge
		Truck	Ambient
Preservation		Drum	Lake
Acid		Tank	Stream
Solvent		Other	Pond
Chemical			Ocean
(Wet Ice)		**Wells**	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

Drum # D025

Black paint sludge

Remarks:

Analysis

TCL, TAL ✓

Samples to: Bact | Bio | Chem | Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number: 204409

Type of Sample: (Grab) Composite: Time | Space

Collection (Ending) Date: Yr 91 | Mo 03 | Day 31

Ending Time (24 Hr): 1025

Beginning Date: Yr | Mo | Day

Beginning Time (24 Hr)

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split

☐ Yes ☐ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: Control Stew + Drum

Collector(s): MM / DA Affiliation: START

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: Drum Thief

LDMS CODE

DATA BASE CODE

STA. TYPE CODE

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
Solvent Extract Other ( )

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	Cleaning Procedure	Landfill	Industrial
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	(Drum)	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	Solvent Rinse:	Depth:	Drum
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		Municipal Treatment
Paper Cap	Methylene Chloride	Storage Tank	Influent
(Teflon Cap)	Other (Specify):	Top	Effluent-Cl
Foil Cap		Middle	Effluent-Non Cl
Other		Bottom	Sludge
		Truck	Ambient
Preservation		Drum	Lake
Acid		Tank	Stream
Solvent		Other	Pond
Chemical			Ocean
(Wet Ice)		Wells	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

Drum # D008

Red / Brown VISCOUS

PAINT

Remarks:

Analysis

TCL, TAL

✓

FM

Form: FTB RPD-11-82-2

Samples to: Bact | Bio | Chem | Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number: 204410

Type of Sample: Grab | Composite (Time | Space)

Collection (Ending) Date: Yr 91 Mo 03 Day 31

Ending Time (24 Hr): 1010

Beginning Date: Yr Mo Day

Beginning Time (24 Hr)

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split

☐ Yes ☐ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: Control Steel + Drum

Collector(s): MM / DA Affiliation: START

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: Glass Thief

LDMS CODE

DATA BASE CODE

STA. TYPE CODE

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
Solvent Extract Other ( )

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	Cleaning Procedure	Landfill	Industrial
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	(Drum)	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	Solvent Rinse:	Depth:	Drum
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		Municipal Treatment
Paper Cap	Methylene Chloride	Storage Tank	Influent
(Teflon Cap)	Other (Specify):	Top	Effluent-Cl
Foil Cap		Middle	Effluent-Non Cl
Other		Bottom	Sludge
		Truck	Ambient
Preservation		Drum	Lake
Acid		Tank	Stream
Solvent		Other	Pond
Chemical			Ocean
(Wet Ice)		Wells	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

Drum # D009 - Pink w/ Gray Striations Paint

Remarks:

Analysis ✓

TCL, TAL

(MS/MSD)

Samples to:

Bact	Bio	Chem	Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number: 204411

Type of Sample: (Grab) Composite

	Time	Space

Collection (Ending) Date

Yr	Mo	Day
91	03	31

Ending Time (24 Hr): 1015

Beginning Date

Yr	Mo	Day

Beginning Time (24 Hr)

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split

☐ Yes ☐ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: Central Steel + Drum

Collector(s): MM / DA Affiliation:

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: GLASS Bowl

LDMS CODE:

DATA BASE CODE:

STA. TYPE CODE:

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
Solvent Extract Other ( )

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	Cleaning Procedure	Landfill	Industrial
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	(Drum)	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	Solvent Rinse:	Depth:	Drum
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		Municipal Treatment
Paper Cap	Methylene Chloride	Storage Tank	Influent
(Teflon Cap)	Other (Specify):	Top	Effluent-Cl
Foil Cap		Middle	Effluent-Non Cl
Other		Bottom	Sludge
		Truck	Ambient
Preservation		Drum	Lake
Acid		Tank	Stream
Solvent		Other	Pond
Chemical			Ocean
Wet Ice		Wells	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

DRUM # D010 -
YELLOW BROWN VISCOUS
PAINT

Remarks:

ANALYSIS
TCL, TAL
RCRA FL. PT.

Samples to:

Bact	Bio	Chem	Other

Station No.:

Sample Depth (Ft.)/Fac. Loc. Code:

Lab Number: 204412

Type of Sample: (Grab) Composite — Time / Space

Collection (Ending) Date: Yr 93 Mo 03 Day 31

Ending Time (24 Hr): 1020

Beginning Date: Yr Mo Day

Beginning Time (24 Hr):

pH:

Sample Temp. (°C):

DO (mg/l):

Cond. (uMHOS/CM):

Salinity(‰):

Sample Split

☐ Yes ☐ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: Clothing Steel & Drum

Collector(s): MM / DA Affiliation: START

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other _____

LDMS CODE _____

DATA BASE CODE _____

STA. TYPE CODE _____

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
Solvent Extract Other ( )

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	**Cleaning Procedure**	**Landfill**	**Industrial**
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	(Drum)	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	**Solvent Rinse:**	Depth:	Drum
Cubitainer	Acetone	Other: _____	Waste Pile
Acetate Core	Hexane	_____	**Municipal Treatment**
Paper Cap	Methylene Chloride	**Storage Tank**	Influent
(Teflon Cap)	Other (Specify):	Top	Effluent-Cl
Foil Cap		Middle	Effluent-Non Cl
Other _____		Bottom	Sludge
_____		**Truck**	Ambient
Preservation		Drum	Lake
Acid _____		Tank	Stream
Solvent _____		Other _____	Pond
Chemical _____		_____	Ocean
(Wet Ice)		**Wells**	Estuary
~~Dry Ice~~		Monitoring	
Ambient		Production	
Other _____		Drinking	
_____		Private	

Sample Location Description:

Drum # D011

Brown viscous paint

Remarks:

Analysis -

TCL / TAL

Samples to:

Bact	Bio	Chem	Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number: 204413

Type of Sample

Grab	Composite	
	Time	Space

Collection (Ending) Date

Yr	Mo	Day
91	03	31

Ending Time (24 Hr): 1025

Beginning Date

Yr	Mo	Day

Beginning Time (24 Hr)

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split

☐ Yes ☐ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: Centre Steel & Drum

Collector(s): MM / DA Affiliation: START

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: GLASS thief

LDMS CODE

DATA BASE CODE

STA. TYPE CODE

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
Solvent Extract Other ( )

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	**Cleaning Procedure**	**Landfill**	**Industrial**
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	(Drum)	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	**Solvent Rinse:**	Depth:	Drum
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		**Municipal Treatment**
Paper Cap	Methylene Chloride	**Storage Tank**	Influent
(Teflon Cap)	Other (Specify):	Top	Effluent-Cl
Foil Cap		Middle	Effluent-Non Cl
Other		Bottom	Sludge
		Truck	Ambient
Preservation		Drum	Lake
Acid		Tank	Stream
Solvent		Other	Pond
Chemical			Ocean
(Wet Ice)		**Wells**	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

Drum # D027 -
Brown paint - 33%
Clear liquid - 66%

Remarks:

Analysis -

TCL, TAL,
RCRA FL. PT

Samples to:

Bact	Bio	Chem	Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number: 204414

Type of Sample

Grab	Composite	
	Time	Space

Collection (Ending) Date

Yr	Mo	Day
91	03	31

Ending Time (24 Hr): 1030

Beginning Date

Yr	Mo	Day

Beginning Time (24 Hr)

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split

☐ Yes ☐ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: Central Steel & Drum

Collector(s): MM / DA Affiliation: START

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: glass thief

LDMS CODE

DATA BASE CODE

STA. TYPE CODE

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
Solvent Extract Other ( )

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	Cleaning Procedure	Landfill	Industrial
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	(Drum)	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	Solvent Rinse:	Depth:	Drum
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		Municipal Treatment
Paper Cap	Methylene Chloride	Storage Tank	Influent
(Teflon Cap)	Other (Specify):	Top	Effluent-Cl
Foil Cap		Middle	Effluent-Non Cl
Other		Bottom	Sludge
Preservation		Truck	Ambient
Acid		Drum	Lake
Solvent		Tank	Stream
Chemical		Other	Pond
(Wet Ice)		Wells	Ocean
Dry Ice		Monitoring	Estuary
Ambient		Production	
Other		Drinking	
		Private	

Samples to:

Bact	Bio	Chem	Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number: 204415

Type of Sample: (Grab) Composite

	Time	Space

Collection (Ending) Date

Yr	Mo	Day
9 8	0 3	3 1

Ending Time (24 Hr): 1035

Beginning Date

Yr	Mo	Day

Beginning Time (24 Hr)

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split ☐ Yes ☐ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Sample Location Description:

Drum # D050 -
Reddish brown Moisture
Paint

Remarks:

5 spoon
bucket

Analysis
TCL, TAL
RCRA Flash
Full TCLP

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: Central Steel + Drum

Collector(s): MM / DA Affiliation: START

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: glass ~~thief~~

LDMS CODE: _____

DATA BASE CODE: _____

STA. TYPE CODE: _____

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
Solvent Extract Other ( )

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
~~Container~~	Cleaning Procedure	Landfill	Industrial
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	(Drum)	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	Solvent Rinse:	Depth:	Drum
Cubitainer	Acetone	Other: _____	Waste Pile
Acetate Core	Hexane	_____	Municipal Treatment
Paper Cap	Methylene Chloride	Storage Tank	Influent
(Teflon Cap)	Other (Specify):	Top	Effluent-Cl
Foil Cap		Middle	Effluent-Non Cl
Other _____		Bottom	Sludge
_____		Truck	Ambient
Preservation		Drum	Lake
Acid _____		Tank	Stream
Solvent _____		Other _____	Pond
Chemical _____		_____	Ocean
(Wet Ice)		Wells	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other _____		Drinking	
_____		Private	

Sample Location Description:

Drum # D056 -
multi colored paint
Brown (gray, purple, green

Remarks:

Analysis
TCL, TAL,
RCRA Fl. pt.
Full TCLP

Form: FTB RPD-11-82-2

Samples to:

Bact	Bio	Chem	Other

Station No.: _____

Sample Depth (Ft.)/Fac. Loc. Code: _____

Lab Number: 204416

Type of Sample

Grab	Composite	
	Time	Space

Collection (Ending) Date

Yr	Mo	Day
91	03	31

Ending Time (24 Hr): 1040

Beginning Date

Yr	Mo	Day

Beginning Time (24 Hr): _____

pH: _____

Sample Temp. (°C): _____

DO (mg/l): _____

Cond. (uMHOS/CM): _____

Salinity(‰): _____

Sample Split

☐ Yes ☐ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: Centre Steel 5 Drum

Collector(s): MM / DA Affiliation: START

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: 9/85 Thief

LDMS CODE

DATA BASE CODE

STA. TYPE CODE

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
Solvent Extract Other ( )

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	**Cleaning Procedure**	**Landfill**	**Industrial**
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	(Drum)	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	**Solvent Rinse:**	Depth:	Drum
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		**Municipal Treatment**
Paper Cap	Methylene Chloride	**Storage Tank**	Influent
(Teflon Cap)	Other (Specify):	Top	Effluent-Cl
Foil Cap		Middle	Effluent-Non Cl
Other		Bottom	Sludge
		Truck	Ambient
Preservation		Drum	Lake
Acid		Tank	Stream
Solvent		Other	Pond
Chemical			Ocean
(Wet Ice)		**Wells**	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

Drum # D0310 - Dup. of D010

Same as D010

Remarks:

Analysis

TCL, TAL,

RCRA Fl. pt

Form: FTB RPD-11-82-2

Samples to: Bact | Bio | Chem | Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number: 204417

Type of Sample: Grab Composite (Time | Space)

Collection (Ending) Date: Yr 88 Mo 03 Day 31

Ending Time (24 Hr): 1020

Beginning Date: Yr Mo Day

Beginning Time (24 Hr)

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split

☐ Yes ☐ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: Control Stud + Drum

Collector(s): MM / DA Affiliation: START

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: trowel

LDMS CODE

DATA BASE CODE

STA. TYPE CODE

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
Solvent Extract Other ( )

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	Cleaning Procedure	Landfill	Industrial
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	(Drum)	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	Solvent Rinse:	Depth:	Drum
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		Municipal Treatment
Paper Cap	Methylene Chloride	Storage Tank	Influent
(Teflon Cap)	Other (Specify):	Top	Effluent-Cl
Foil Cap		Middle	Effluent-Non Cl
Other		Bottom	Sludge
		Truck	Ambient
Preservation		Drum	Lake
Acid		Tank	Stream
Solvent		Other	Pond
Chemical			Ocean
(Wet Ice)		Wells	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

Drum # D0261 –
Brown purple solid
PAINT chunks

Remarks:

ANALYSIS

TCL, TAL

(MS / MSD)

Form: FTB RPD-11-82-2

Samples to:

Bact	Bio	Chem	Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number: 204418

Type of Sample: (Grab) Composite (Time / Space)

Collection (Ending) Date: Yr 91 Mo 03 Day 31

Ending Time (24 Hr): 1050

Beginning Date: Yr Mo Day

Beginning Time (24 Hr)

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split

☐ Yes ☐ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: Cortese Steel + Drum

Collector(s): MM/DA Affiliation: START

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: Trowel

LDMS CODE

DATA BASE CODE

STA. TYPE CODE

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
Solvent Extract Other ( )

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	**Cleaning Procedure**	**Landfill**	**Industrial**
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	(Drum)	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	**Solvent Rinse:**	Depth:	Drum
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		**Municipal Treatment**
Paper Cap	Methylene Chloride	**Storage Tank**	Influent
(Teflon Cap)	Other (Specify):	Top	Effluent-Cl
Foil Cap		Middle	Effluent-Non Cl
Other		Bottom	Sludge
		Truck	Ambient
Preservation		Drum	Lake
Acid		Tank	Stream
Solvent		Other	Pond
Chemical			Ocean
(Wet Ice)		**Wells**	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

Drum # D0260-
Silver/Gray Solid

Remarks:

Analysis
TCL, TAL

Samples to:

Bact	Bio	Chem	Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number: 204419

Type of Sample

Grab	Composite	
	Time	Space

Collection (Ending) Date

Yr	Mo	Day
91 8	0 3	3 1

Ending Time (24 Hr): 1055

Beginning Date

Yr	Mo	Day

Beginning Time (24 Hr)

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split

☐ Yes ☐ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: Centrum Steel + Drum

Collector(s): MM / DA Affiliation: START

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: Trowel

LDMS CODE

DATA BASE CODE

STA. TYPE CODE

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
Solvent Extract Other ( )

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)

Container	Cleaning Procedure	Preservation
Glass Jar	Detergent Wash	Acid
Plastic Jar	Water Rinse	Solvent
Metal	Acid Rinse	Chemical
POA Vial	Solvent Rinse:	Wet Ice
Cubitainer	Acetone	Dry Ice
Acetate Core	Hexane	Ambient
Paper Cap	Methylene Chloride	Other
Teflon Cap	Other (Specify):	
Foil Cap		
Other		

Sample Source Type (Circle)

Landfill	Industrial
Leachate	Effluent
Drum	Process Stream
Test Well	Holding Pond
Depth:	Drum
Other:	Waste Pile
	Municipal Treatment
Storage Tank	Influent
Top	Effluent-Cl
Middle	Effluent-Non Cl
Bottom	Sludge
Truck	Ambient
Drum	Lake
Tank	Stream
Other	Pond
	Ocean
Wells	Estuary
Monitoring	
Production	
Drinking	
Private	

Sample Location Description:

Drum # D0361 - Drum. d

D061

SAME AS D061

Remarks:

Analysis

TCL, TAL

Samples to:

Bact	Bio	Chem	Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number: 204420

Type of Sample: Grab Composite (Time Space)

Collection (Ending) Date: Yr 91 Mo 03 Day 31

Ending Time (24 Hr): ~~99~~ MM 1050

Beginning Date: Yr Mo Day

Beginning Time (24 Hr)

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split

☐ Yes ☐ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

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10 ☐
☐
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Total 1	Total 18	Total

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CENTRAL STEEL & DRUM SITE
704-738 Doremus Ave.
Block 5074, Lot 1
Newark, Essex County
New Jersey 07105

Drum/Waste Pile Sampling Event
March 31, 1998

Attachment III

X-Ray Fluorescence Report
April 22, 1998

X-RAY FLUORESCENCE ANALYSIS

CENTRAL STEEL AND DRUM SITE

Newark , New Jersey

Prepared by:

Superfund Technical Assessment and Response Team
Roy F. Weston, Inc.
Federal Programs Division
Edison, New Jersey

Prepared for:

U.S. Environmental Protection Agency
Region II
Edison, New Jersey

DCN #: START-02-F-001737
TDD #: 02-97-09-0008
EPA Contract No.: 68-W5-0019

Approved by:

START

Ray Klimcsak, Project Manager — Date: 4/22/98

Joseph M. Soroka, Quality Assurance Officer — Date: 3/20/98

EPA

Lou Diguardia, On-Scene Coordinator — Date: 4/23/98

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1.0 Introduction

The Region II Superfund Technical Assessment and Response Team (START) provided on-site analytical services for X-Ray Fluorescence (XRF) of waste pile samples at the Central Steel and Drum site in Newark , New Jersey on 9 March 1998 under TDD number 02-97-09-0008. Samples were analyzed in-situ.

A Spectrace Model 9000 field portable XRF spectrometer was used in order to assure the timely acquisition of all the data. Samples were not sent for confirmation analysis; the data obtained therefore satisfy QA-1 (screening) criteria.

2.0 Methods

Region II START conducted sampling at 20 points in the waste pile during the course of this investigation. Sample locations were identified using site references and documented in site logbooks.

2.1 Sample Preparation - In-situ

After the surface debris were removed, a 6" x 6" area was mixed and flattened using dedicated plastic scoops and spoons. Any surface debris and sharp objects which could rupture the XRF probe window was removed. A piece of fresh 0.2 mil Mylar X-ray film was used to cover the probe of the XRF prior to analysis in order to avoid cross-contamination between samples.

2.2 XRF Analysis

A Spectrace Model 9000 XRF unit (S/N Q-044) was used for the analysis. This unit is equipped with three radioactive isotope sources; Cd-109, Fe-55, and Am-241. The analytes of concern at the site are lead (Pb). The initial counting times for the Cd-109, Fe-55 and Am-241 sources were set at 30 seconds for the Cd-109 source and 15 seconds each for the Fe-55 and Am-241 sources.

An energy calibration check, resolution check and zero check were performed to assure that the instrument was operating within specifications. Additionally, three NIST standards (NIST 2709, 2710 and 2711) and a sample of Ottawa sand (used as a blank to confirm that there was no cross-contamination) were analyzed periodically as detailed in the following sections.

XRF analysis was conducted in accordance with EPA/ERT SOP #1713, *Spectrace 9000 Field Portable X-Ray Fluorescence Operating Procedures*, as well as, the instrument instruction manuals.

2.3 Detection and Quantitation limits

A low-concentration standard, NIST #2709 (lead = 18.9 ppm), was analyzed at the beginning and end of each day and after every 10 samples. The standard deviation (SD) of the non-consecutive analysis was used to calculate the method detection limit (MDL) and method quantitation limits (MQL) for the analytes. The MDL is defined as three times the SD of the analyses in ppm, while the MQL is defined as ten times the SD in ppm.

2.4 Application Model Verification

The Spectrace 9000 fundamental parameters model was verified by the analysis of a mid-concentration standard, NIST #2711 (lead = 1,162 ppm) and a high-concentration standard, NIST #2710 (lead = 5,532 ppm), consecutive to the analysis of the NIST #2709 standards. The results of these standards are used to estimate the precision and accuracy of the Spectrace 9000.

2.5 XRF Confirmation by ICP

In order for the XRF data to qualify as QA-2 level data, at least 10% of the samples are sent to a laboratory for analysis by inductively coupled plasma emission spectrometry (ICPES). A regression analysis of the ICPES and XRF data must yield a coefficient of determination, r^2, greater than 0.7 (*ERT/EPA Quality Assurance Technical Bulletin on Field Portable X-ray Fluorescence*, May 1991). The model obtained by the regression is used to validate or adjust the Spectrace 9000 results.

No confirmation was obtained for this event; the data therefore qualifies as QA-1 data.

3.0 Quality Assurance/Quality Control

The following Quality Assurance (QA) protocols were used to insure the integrity of the data collected by the Spectrace 9000:

1. The use of chain of custody forms and field logs.

2. Daily instrument checks (Energy Calibration Check, Resolution Check, and Zero Check).

3. Initial and continuing analysis of NIST standards and a sand blank.

4. Field duplicate and replicate samples were collected and analyzed for at least 10% of the sample locations.

5. Minimum MDL and MQL were calculated for all analytes of interest.

4.0 Results and Discussion

4.1 Sample Results

Twenty areas of the waste pile at the Central Steel and Drum site were analysed in-situ by XRF for lead. Table 1 contains a summary of the results. Lead concentrations ranged from 167 ppm to 9480 ppm. Only three sampling points had lead concentrations below 500 ppm.

4.2 NIST Results

Table 2 details the raw data for the non-consecutive analysis of the NIST #2709 standard for lead. Calculated detection (MDL) and quantitation (MQL) limits are 29 and 290 ppm, restpectively. Table 2 also details the raw data results of the non-consecutive analysis of standards NIST #2710 and NIST #2711 and the SAND blank. The NIST certified lead concentrations in standard #2710 is 5,532 ppm. The average results for the XRF analysis was 4720 ppm or a relative percent difference (RPD) of 14.6. For standard #2711, the NIST certified value for lead is 1,162 ppm. The average XRF results was 1052 ppm (9.5% RPD). The lower average results obtained by the XRF for the NIST standards are as expected and are due to particle size effects. They are consistent with previous XRF results.

4.3 Replicate and Duplicate Results

Two duplicate measurements were obtained with RPD of 9.9% and 19.2%. These results indicate that the samples were relatively homogenous. Two replicates measurements were also obtianed with RPD of 5.5% and 1.2%. Duplicate measurements are obtained by moving the sampling probe several inches for the second measurement and are indicative of sample homogeneity. Replicate measuremetns are a second meaurement obtained without moving the sample probe and are indicative of the instrument precision.

5.0 Conclusions

Twenty samples were analysed in-situ using the Spectrace XRF for lead. Lead concentrations ranged from 167 ppm to 9480 ppm. QA results show that the XRF was operating to specifications.

TABLE 1:

XRF ANALYSIS OF CENTRAL STEEL AND DRUM SAMPLES

9 March 1998

Sample identification	Lead (in ppm)[1]	
Pile 1	1190	
Pile 2	1870	
Pile 3	1280	
Pile 4	9480	
Pile 5	950	
Pile 5 Duplicate	860	(RPD=9.9%)
Pile 6	3520	
Pile 7	9450	
Pile 8	167 J	
Pile 9	1140	
Pile 10	3890	
Pile 10 Replicate	3680	(RPD=5.5%)
Pile 11	6490	
Pile 12	4420	
Pile 13	2820	
Pile 13 Duplicate	3420	(RPD=19.2%)
Pile 13 duplicate replicate	3380	(RPD=1.2%)
Pile 14	448	
Pile 15	990	
Pile 16	8050	
Pile 17	9320	
Pile 18	269 J	
Pile 19 (paint waste)	3060	
Pile 20	3450	

[1] In-situ measurements using Spectrace 9000 XRF. Counting times of 30/15/15 seconds for Cd-109/Fe-55/Am-241 sources.

J - Between calculated detection and quantitation limits.

TABLE 2:

XRF ANALYSIS OF STANDARDS
9 March 1998

	SAND	NIST 2709	NIST 2710	NIST 2711
	20	39	4410	1100
	26	-4.6	4460	1057
	-14	52	5070	1020
	-23	-3.5	4940	1030
Average:	2.3	20.8	4720	1052
NIST Conc:	--	18.9	5532	1162
Standard deviation	24.4	29.1	--	--
MDL (calculated)	--	87	--	--
RPD	--	--	14.6	9.5

APPENDIX A -

FIELD DATA SHEETS

CENTRAL STEEL & DRUM SITE
704-738 Doremus Ave.
Block 5074, Lot 1
Newark, Essex County
New Jersey 07105

Drum/Waste Pile Sampling Event
March 31, 1998

Attachment IV

U.S EPA Region II, RCRA Report
November 25, 1997

RCRA REPORT

Central Steel Drum
Doremus Ave & Delaney
Newark, NJ

November 25, 1997

Participating Personnel:

U.S. Environmental Protection Agency
Thuan M. Tran, Environmental Scientist
Kathleen Savino, Environmental Scientist
Dave Dugan, NEIC

Report Prepared By:

Thuan M. Tran, Environmental Scientist

Approved for the Director By:

Dore LaPosta, Chief,
Monitoring & Assessment Branch

RCRA Sampling Investigation

Objective

On November 25, 1997, the US Environmental Protection Agency (USEPA) conducted a RCRA sampling investigation of Central Steel Drum, Newark, NJ. The purpose of the inspection was to determine whether the permittee is in compliance with RCRA regulations.

Site Location & Description

Central Steel Drum is located on the corner of Doremus Avenue and Delancey Street in Newark, New Jersey. The abandoned facility is located in a heavily industrialized area. The sampling location for this investigation was within a warehouse that is approximately 150 yards from the gate entrance. The warehouse contained approximately 300, 55-gallon drums that ranged from half to completely full.

Sampling & Locations

A sampling team entered the warehouse with the proper personal protective equipment to survey the area and to place the necessary sampling containers on the respective drums. Thirty four (34) drums were located to be sampled and certified clear 8 oz. glass jars with Teflon-lined lids were placed on there drums for the samplers (See Figure 1 for drum list). The sampling team exited the warehouse and suited up with SCBA units to conduct the sampling.

Coliwasas were used to collect the samples. A new coliwasa was used for every drum. Twenty-four (24) of the 34 drums were sampled for RCRA ignitability. Pictures were taken of the 24 samples (see photos).

Sampling & Analysis

The Lab. Numbers of each sample taken, the Analyses Requested and the Lab. Results are:

Lab. Numbers:	Sampling Location:	Analyses:	Lab. Results:
204357	Warehouse drum 033	Ignitability (RCRA)	135°F K
204358	Warehouse drum 066	Ignitability (RCRA)	145°F L
204359	Warehouse drum 068	Ignitability (RCRA)	145°F L
204360	Warehouse drum 119	Ignitability (RCRA)	135°F K
204361	Warehouse drum 122	Ignitability (RCRA)	135°F K
204362	Warehouse drum 008	Ignitability (RCRA)	135°F K
204363	Warehouse drum 009	Ignitability (RCRA)	135°F K
204364	Warehouse drum 056	Ignitability (RCRA)	135°F K
204365	Warehouse drum 114	Ignitability (RCRA)	135°F K
204366	Warehouse drum 059	Ignitability (RCRA)	135°F K
204367	Warehouse drum 170	Ignitability (RCRA)	135°F K
204368	Warehouse drum 076	Ignitability (RCRA)	145°F L
204369	Warehouse drum 148	Ignitability (RCRA)	135°F K
204370	Warehouse drum 147	Ignitability (RCRA)	135°F K
204371	Warehouse drum 142	Ignitability (RCRA)	135°F K
204372	Warehouse drum 140	Ignitability (RCRA)	135°F K
204373	Warehouse drum 139	Ignitability (RCRA)	135°F K
204374	Warehouse drum 089	Ignitability (RCRA)	135°F K
204375	Warehouse drum 137	Ignitability (RCRA)	135 °F K
099617	Warehouse drum 104	Ignitability (RCRA)	135°F K
099618	Warehouse drum 135	Ignitability (RCRA)	135°F K
099619	Warehouse drum 132	Ignitability (RCRA)	135°F K
099620	Warehouse drum 235	Ignitability (RCRA)	135°F
099621	Warehouse drum 117	Ignitability (RCRA)	135°F K

* Notes: K = Actual value known to be less than the value given
L = Actual value known to be greater than the value given

Results of Analyses

Any sample with a flash point less than 140°F (60°C) must be analysed for percent (%) water by weight. If the sample's flash point is less than 140°F and it contains less than 50% water by weight, it is considered a hazardous waste.

If the sample has greater than 50 % water by weight, there is a possibility that the sample may be a hazardous waste. To further determine the outcome, the sample must be analysed for % alcohol. If the sample meets all the characteristics and has an alcohol content greater than 24%, the sample is considered a hazardous waste.

Samples that are considered hazardous waste from these criteria are as follows:

Laboratory Number	Ignitability (°F, Lab. Results)	Water (% Weight)
204360	135°F	0.00
204361	135°F	0.45
204362	135°F	0.00
204363	135°F	0.10
204364	135°F	0.35
204365	135°F	0.24
204366	135°F	0.47
204367	135°F	0.92
204369	135°F	0.37
204370	135°F	0.00
204371	135°F	2.05
204372	135°F	0.23
204373	135°F	2.67
204374	135°F	0.38
204375	135°F	1.00
099617	135°F	1.35
099618	135°F	0.00
099619	135°F	1.69
099621	135°F	2.13

See the Lab Data Management System - Region II for results of all sampling analyses for Central Steel Drum, Newark, Essex County, NJ. Accompanying the results are the field data sheets, chain of custody, receipt of samples and analysis requests.

Findings & Conclusion

Based on the results from the sampling survey at Central Steels Drum, the facility is not meeting RCRA regulations.

Nineteen (19) of the 24 samples (Lab. Numbers 204360 thru 204367, 204369 thru 204375, 099617 thru 099619 and 099621) are hazardous waste. These samples have flash points of less than 140°F (60°C) and % water by weight of less than 50%.

Recommendation

Appropriate action to ensure RCRA regulations compliance is recommended.

Figure 1. Drum List

CENTRAL STEEL DRUM:

Full 55-gallon drums containing a flammable organic liquid:

Drum #008	Drum #142
#009	#147
#033	#148
#056	#150
#057	#170
#059	#235
#060	
#066	
#068	
#076	
#084	
#089	
#104	
#112	
#114	
#117	
#118	
#119	
#121	
#122	
#128	
#132	
#134	
#135	
#137	
#138	
#139	
#140	

DATA NARRATIVE

3 0 JUL 1998

Project #683
Cental Steel Drum

Sample 204364 was a bi-phasic sample which consisted of a dark oil-like layer floating on top of a lower aqueous phase. The results reported for this sample are for the oil-like phase. The aqueous phase had a flash point of 145°F with an L remark code, the result of the paint filter test is 0 and the % water is 94.7.

LAB DATA MANAGEMENT SYSTEM - REGION II
COMPLETED PROJECT APPROVAL

REPORT DATE 98/07/29

PROJECT NUMBER	PROJECT DATE	PROJECT NAME	
683	97/11/25	CENTRAL STEEL DRUM	APPROVED

J.C.R. Boulton for K. Kubik
7-30-98

COMPLETED ANALYSIS REPORT

REPORT DATE: 98/07/29

PROJECT NO: 683

PROJECT NAME: CENTRAL STEEL DRUM

EXPLANATIONS OF REMARK CODES

REMARK CODE	EXPLANATION
B	RESULTS BASED UPON COLONY COUNTS OUTSIDE ACCEPTABLE RANGE
J	ESTIMATED VALUE
K	ACTUAL VALUE KNOWN TO BE LESS THAN VALUE GIVEN
L	ACTUAL VALUE KNOWN TO BE GREATER THAN VALUE GIVEN
N	NO OBSERVABLE EFFECT CONCENTRATION < 0.3%
O	SAMPLED BUT NOT ANALYZED DUE TO LAB ACCIDENT
T	REPORTED VALUE LESS THAN CRITERIA OF DETECTION
U	REPORTING LIMIT

QA/QC REMARK CODES

CODE	EXPLANATION
QD	ACCURACY CHECK SAMPLE ABOVE UPPER ACCEPTANCE LIMIT
QE	ACCURACY CHECK SAMPLE BELOW LOWER ACCEPTANCE LIMIT
QF	PRECISION OF CALIBRATION CURVE LESS THAN ACCEPTANCE CRITERIA
QJ	ESTIMATED DETECTION LIMIT DUE TO INTERFERENCE
QG	CONTINUING CALIBRATION CHECK DOES NOT MEET ACCEPTANCE CRITERIA
QS	SPIKE RECOVERIES ABOVE UPPER ACCEPTANCE LIMIT
QR	SPIKE RECOVERIES BELOW LOWER ACCEPTANCE LIMIT
QP	SAMPLE REPLICATE PRECISION DOES NOT MEET ACCEPTANCE CRITERIA
QH	RECOMMENDED HOLDING TIMES EXCEEDED
QT	TENTATIVELY IDENTIFIED COMPOUND
QM	PRESENCE OF MATERIAL VERIFIED BUT NOT QUANTIFIED
QB	BLANK CONTAMINATED BY ANALYTE IN EXCESS OF ACCEPTANCE CRITERIA
QQ	SAMPLE IMPROPERLY PRESERVED

LOCATION CODES FOR IDENTIFICATION OF SAMPLING POINTS AT INDUSTRIAL / SANITARY FACILITIES, LANDFILLS, HAZARDOUS WASTE SITES.

CODE NUMBERS	SAMPLING POINTS
1001 - 1050	EFFLUENT PIPE NUMBER 001 TO 050
1051 - 1099	OTHER EFFLUENTS SUCH AS COOLING TOWER DISCHARGE, DISCHARGE FROM HOLDING PONDS, ETC...
1100 - 1249	IN PLANT SAMPLES
1435 - 1454	SEPARATE INFLUENT POINTS/WATER SOURCES
15XX	INFLUENT ASSOCIATED WITH EFFLUENT 10XX
2000	BLANK FOR VOLATILE ORGANICS
3000 - 3099	GROUND WATER FROM WELL 01 TO 99
3100 - 3199	SEDIMENT SAMPLE (WATER BOTTOM)
3200 - 3299	SOIL SAMPLE
3300 - 3399	STREAM WATER SAMPLE
3400 - 3499	LAGOON SAMPLE
3500 - 3599	STORAGE TANK SAMPLE
3600 - 3699	LEACHATE SAMPLE
3700 - 3799	OTHER TYPE SAMPLE

COMPLETED ANALYSIS REPORT

REPORT DATE: 98/07/29

PROJECT NO: 683

PROJECT NAME: CENTRAL STEEL DRUM

STATION NO	DATE FROM TO	TIME OF DAY	LABNO	PARNO	PARAMETER NAME	UNITS	CHEMISTRY	VALUE & REMARK	QA/QC REMARK
NONE	97/11/25	1313							
COMPOSITE	97/11/25	1320							
DEPTH: 0000 SUBSTRATE: OTHER									
DESCRIPTION: DRUM #104									
			099617	99999	LIQUID		1=Y;0=N	1	
				99994	FLASH POINT, ASTM-D93	DEG F		135	K
				99999	WATER (% WEIGHT)	%	TOTAL	1.35	
NONE	97/11/25	1320							
COMPOSITE	97/11/25	1327							
DEPTH: 0000 SUBSTRATE: OTHER									
DESCRIPTION: DRUM #135									
			099618	99999	LIQUID		1=Y;0=N	0	
				99994	FLASH POINT, ASTM-D93	DEG F		135	K
				99999	WATER (% WEIGHT)	%	TOTAL	0	
NONE	97/11/25	1327							
COMPOSITE	97/11/25	1334							
DEPTH: 0000 SUBSTRATE: OTHER									
DESCRIPTION: DRUM #132									
			099619	99999	LIQUID		1=Y;0=N	1	
				99994	FLASH POINT, ASTM-D93	DEG F		135	K
				99999	WATER (% WEIGHT)	%	TOTAL	1.69	
NONE	97/11/25	1334							
COMPOSITE	97/11/25	1341							
DEPTH: 0000 SUBSTRATE: OTHER									
DESCRIPTION: DRUM #235									
			099620	99999	LIQUID		1=Y;0=N	1	
				99994	FLASH POINT, ASTM-D93	DEG F		135	
				99999	WATER (% WEIGHT)	%	TOTAL	67.1	
				99999	ALCOHOLS (%VOL)	%	TOTAL	8.0	U
NONE	97/11/25	1341							
COMPOSITE	97/11/25	1348							
DEPTH: 0000 SUBSTRATE: OTHER									
DESCRIPTION: DRUM #117									
			099621	99999	LIQUID		1=Y;0=N	1	
				99994	FLASH POINT, ASTM-D93	DEG F		135	K
				99999	WATER (% WEIGHT)	%	TOTAL	2.13	

COMPLETED ANALYSIS REPORT

REPORT DATE: 98/07/29

PROJECT NO: 683

PROJECT NAME: CENTRAL STEEL DRUM

STATION NO	DATE FROM TO	TIME OF DAY	LABNO	PARNO	PARAMETER NAME	UNITS	CHEMISTRY	VALUE & REMARK	QA/QC REMARK
)ONE	97/11/25	1100							
COMPOSITE	97/11/25	1107							
)EPTH: 0000	SUBSTRATE: OTHER								
)ESCRIPTION: DRUM #033									
			204357	99999	LIQUID		1=Y;0=N	1	
				99994	FLASH POINT, ASTM-D93	DEG F		135	K
				99999	WATER (% WEIGHT)	%	TOTAL	98.5	
				99999	ALCOHOLS (%VOL)	%	TOTAL	0.10	
)ONE	97/11/25	1107							
COMPOSITE	97/11/25	1114							
)EPTH: 0000	SUBSTRATE: OTHER								
)ESCRIPTION: DRUM #066									
			204358	99999	LIQUID		1=Y;0=N	1	
				99994	FLASH POINT, ASTM-D93	DEG F		145	L
)ONE	97/11/25	1114							
COMPOSITE	97/11/25	1121							
)EPTH: 0000	SUBSTRATE: OTHER								
)ESCRIPTION: DRUM #068									
			204359	99999	LIQUID		1=Y;0=N	1	
				99994	FLASH POINT, ASTM-D93	DEG F		145	L
)ONE	97/11/25	1121							
COMPOSITE	97/11/25	1128							
)EPTH: 0000	SUBSTRATE: OTHER								
)ESCRIPTION: DRUM #119									
			204360	99999	LIQUID		1=Y;0=N	1	
				99994	FLASH POINT, ASTM-D93	DEG F		135	K
				99999	WATER (% WEIGHT)	%	TOTAL	0	
)ONE	97/11/25	1128							
COMPOSITE	97/11/25	1135							
)EPTH: 0000	SUBSTRATE: OTHER								
)ESCRIPTION: DRUM #122									
			204361	99999	LIQUID		1=Y;0=N	1	
				99994	FLASH POINT, ASTM-D93	DEG F		135	K
				99999	WATER (% WEIGHT)	%	TOTAL	0.45	

COMPLETED ANALYSIS REPORT

REPORT DATE: 98/07/29

PROJECT NO: 683

PROJECT NAME: CENTRAL STEEL DRUM

STATION NO	DATE FROM TO	TIME OF DAY	LABNO	PARNO	PARAMETER NAME	UNITS	CHEMISTRY	VALUE & REMARK	QA/QC REMARK
NONE	97/11/25	1135							
COMPOSITE	97/11/25	1142							
DEPTH: 0000 SUBSTRATE: OTHER									
DESCRIPTION: DRUM #008									
			204362	99999	LIQUID		1=Y;0=N	1	
				99994	FLASH POINT, ASTM-D93	DEG F		135	K
				99999	WATER (% WEIGHT)	%	TOTAL	0	
NONE	97/11/25	1142							
COMPOSITE	97/11/25	1149							
DEPTH: 0000 SUBSTRATE: OTHER									
DESCRIPTION: DRUM #009									
			204363	99999	LIQUID		1=Y;0=N	1	
				99994	FLASH POINT, ASTM-D93	DEG F		135	K
				99999	WATER (% WEIGHT)	%	TOTAL	0.1	
NONE	97/11/25	1149							
COMPOSITE	97/11/25	1156							
DEPTH: 0000 SUBSTRATE: OTHER									
DESCRIPTION: DRUM #056									
			204364	99999	LIQUID		1=Y;0=N	0	
				99994	FLASH POINT, ASTM-D93	DEG F		135	K
				99999	WATER (% WEIGHT)	%	TOTAL	0.35	
NONE	97/11/25	1156							
COMPOSITE	97/11/25	1203							
DEPTH: 0000 SUBSTRATE: OTHER									
DESCRIPTION: DRUM #114									
			204365	99999	LIQUID		1=Y;0=N	1	
				99994	FLASH POINT, ASTM-D93	DEG F		135	K
				99999	WATER (% WEIGHT)	%	TOTAL	0.24	
NONE	97/11/25	1203							
COMPOSITE	97/11/25	1210							
DEPTH: 0000 SUBSTRATE: OTHER									
DESCRIPTION: DRUM #059									
			204366	99999	LIQUID		1=Y;0=N	1	
				99994	FLASH POINT, ASTM-D93	DEG F		135	K
				99999	WATER (% WEIGHT)	%	TOTAL	0.47	

COMPLETED ANALYSIS REPORT

REPORT DATE: 98/07/29

PROJECT NO: 683

PROJECT NAME: CENTRAL STEEL DRUM

STATION NO	DATE FROM TO	TIME OF DAY	LABNO	PARNO	PARAMETER NAME	UNITS	CHEMISTRY	VALUE & REMARK	QA/QC REMARK
NONE	97/11/25	1210							
COMPOSITE	97/11/25	1217							
DEPTH: 0000 SUBSTRATE: OTHER									
DESCRIPTION: DRUM #170									
			204367	99999	LIQUID		1=Y;0=N	1	
				99994	FLASH POINT, ASTM-D93	DEG F		135	K
				99999	WATER (% WEIGHT)	%	TOTAL	0.92	
NONE	97/11/25	1217							
COMPOSITE	97/11/25	1224							
DEPTH: 0000 SUBSTRATE: OTHER									
DESCRIPTION: DRUM #076									
			204368	99999	LIQUID		1=Y;0=N	1	
				99994	FLASH POINT, ASTM-D93	DEG F		145	L
NONE	97/11/25	1224							
COMPOSITE	97/11/25	1231							
DEPTH: 0000 SUBSTRATE: OTHER									
DESCRIPTION: DRUM #148									
			204369	99999	LIQUID		1=Y;0=N	1	
				99994	FLASH POINT, ASTM-D93	DEG F		135	K
				99999	WATER (% WEIGHT)	%	TOTAL	0.37	
NONE	97/11/25	1231							
COMPOSITE	97/11/25	1238							
DEPTH: 0000 SUBSTRATE: OTHER									
DESCRIPTION: DRUM #147									
			204370	99999	LIQUID		1=Y;0=N	1	
				99994	FLASH POINT, ASTM-D93	DEG F		135	K
				99999	WATER (% WEIGHT)	%	TOTAL	0	
NONE	97/11/25	1238							
COMPOSITE	97/11/25	1245							
DEPTH: 0000 SUBSTRATE: OTHER									
DESCRIPTION: DRUM #142									
			204371	99999	LIQUID		1=Y;0=N	0	
				99994	FLASH POINT, ASTM-D93	DEG F		135	K
				99999	WATER (% WEIGHT)	%	TOTAL	2.05	

COMPLETED ANALYSIS REPORT

REPORT DATE: 98/07/29

PROJECT NO: 683

PROJECT NAME: CENTRAL STEEL DRUM

STATION NO	DATE FROM TO	TIME OF DAY	LABNO	PARNO	PARAMETER NAME	UNITS	CHEMISTRY	VALUE & REMARK	QA/QC REMARK
NONE	97/11/25	1245							
COMPOSITE	97/11/25	1252							
DEPTH: 0000 SUBSTRATE: OTHER									
DESCRIPTION: DRUM #140									
			204372	99999	LIQUID		1=Y;0=N	1	
				99994	FLASH POINT, ASTM-D93	DEG F		135	K
				99999	WATER (% WEIGHT)	%	TOTAL	0.23	
NONE	97/11/25	1252							
COMPOSITE	97/11/25	1259							
DEPTH: 0000 SUBSTRATE: OTHER									
DESCRIPTION: DRUM #139									
			204373	99999	LIQUID		1=Y;0=N	1	
				99994	FLASH POINT, ASTM-D93	DEG F		135	K
				99999	WATER (% WEIGHT)	%	TOTAL	2.67	
NONE	97/11/25	1259							
COMPOSITE	97/11/25	1306							
DEPTH: 0000 SUBSTRATE: OTHER									
DESCRIPTION: DRUM #089									
			204374	99999	LIQUID		1=Y;0=N	1	
				99994	FLASH POINT, ASTM-D93	DEG F		135	K
				99999	WATER (% WEIGHT)	%	TOTAL	0.38	
NONE	97/11/25	1306							
COMPOSITE	97/11/25	1313							
DEPTH: 0000 SUBSTRATE: OTHER									
DESCRIPTION: DRUM #137									
			204375	99999	LIQUID		1=Y;0=N	1	
				99994	FLASH POINT, ASTM-D93	DEG F		135	K
				99999	WATER (% WEIGHT)	%	TOTAL	1.0	

***** END OF PROJECT *****

Photo #01: Drum 033: Lab. No. 204357

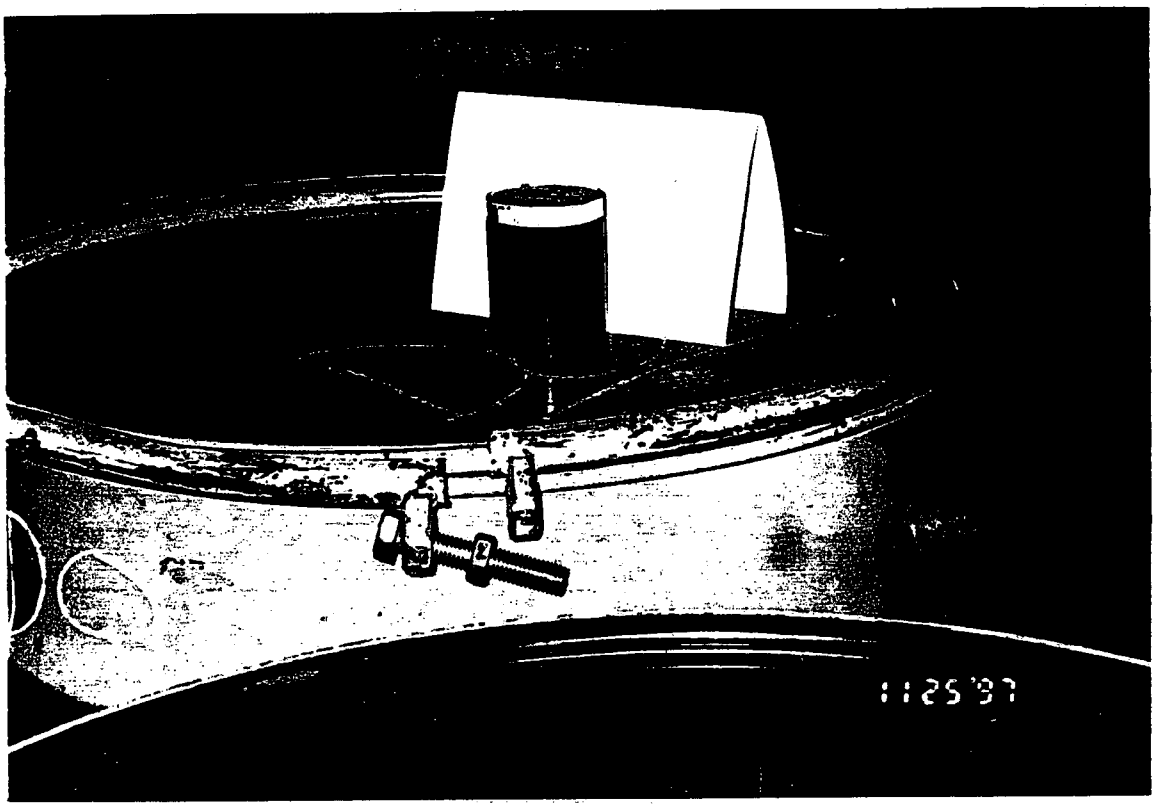


Photo #02: Drum 066: Lab No. 204358

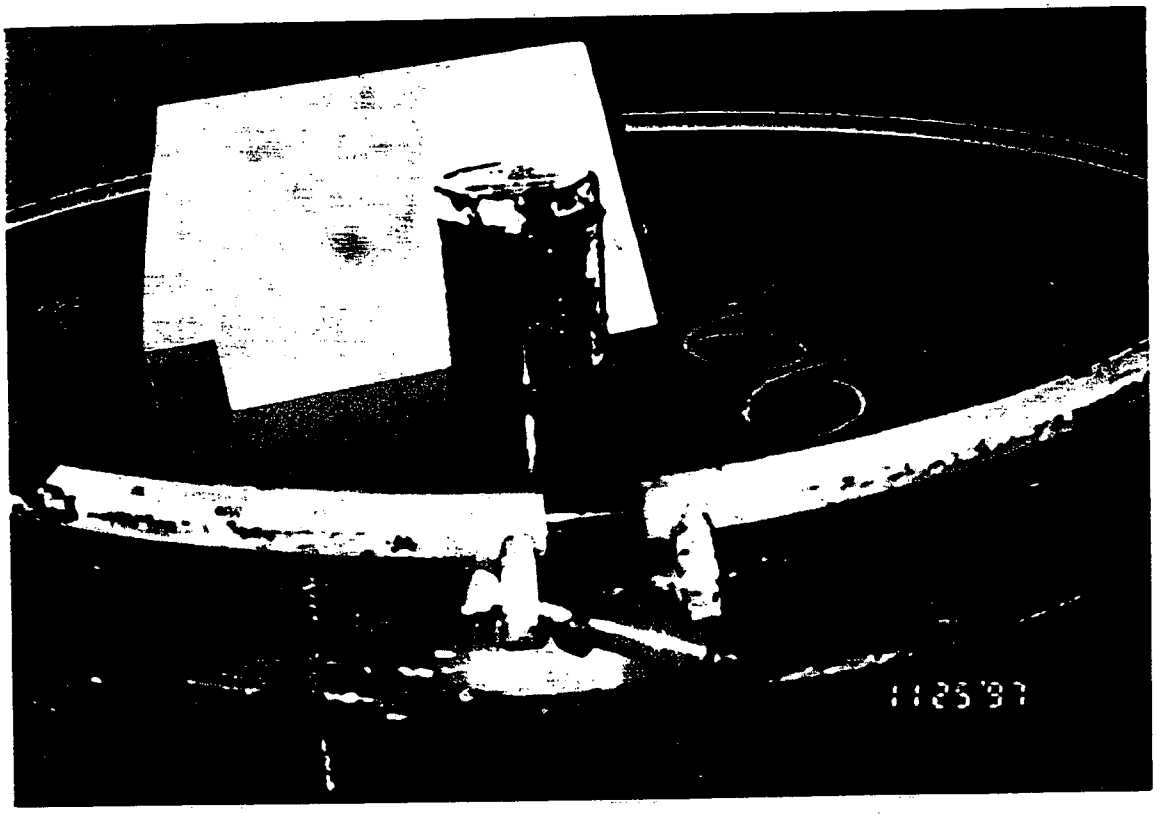


Photo #03: Drum 068: Lab. No. 204359

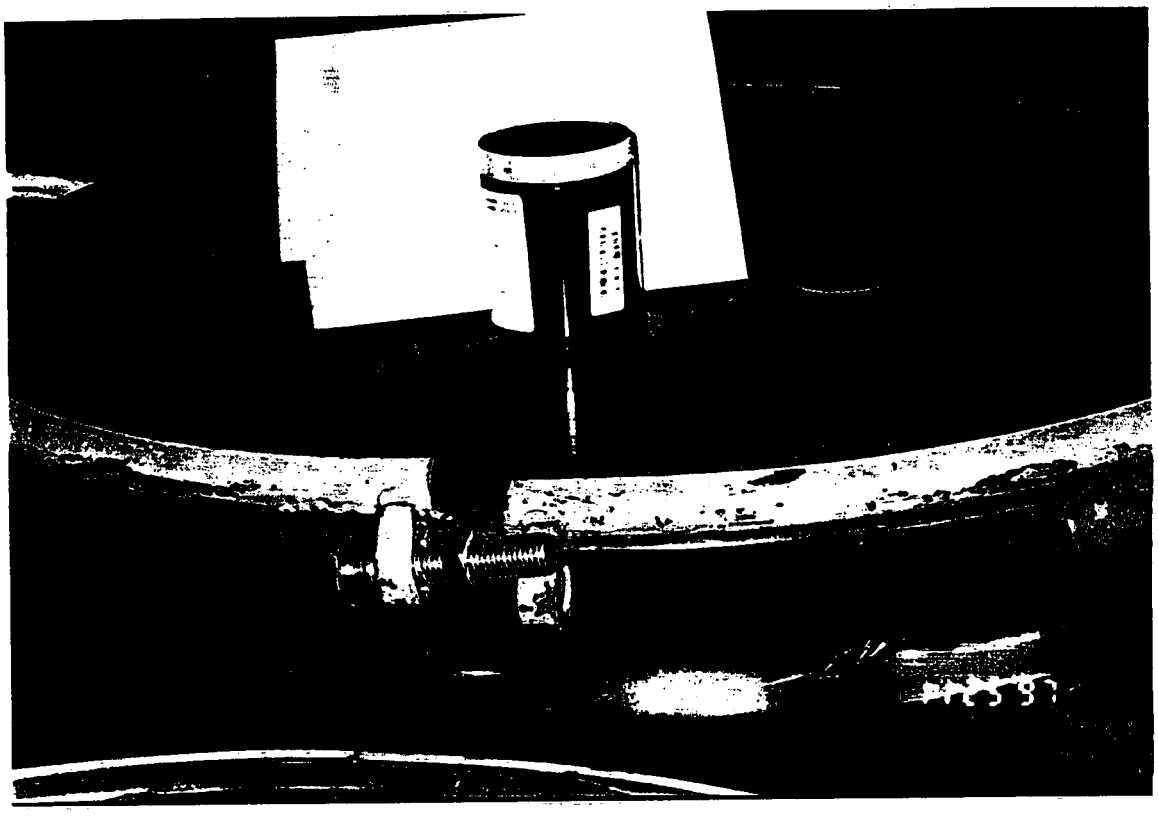


Photo #04: Drum 119: Lab No. 204360

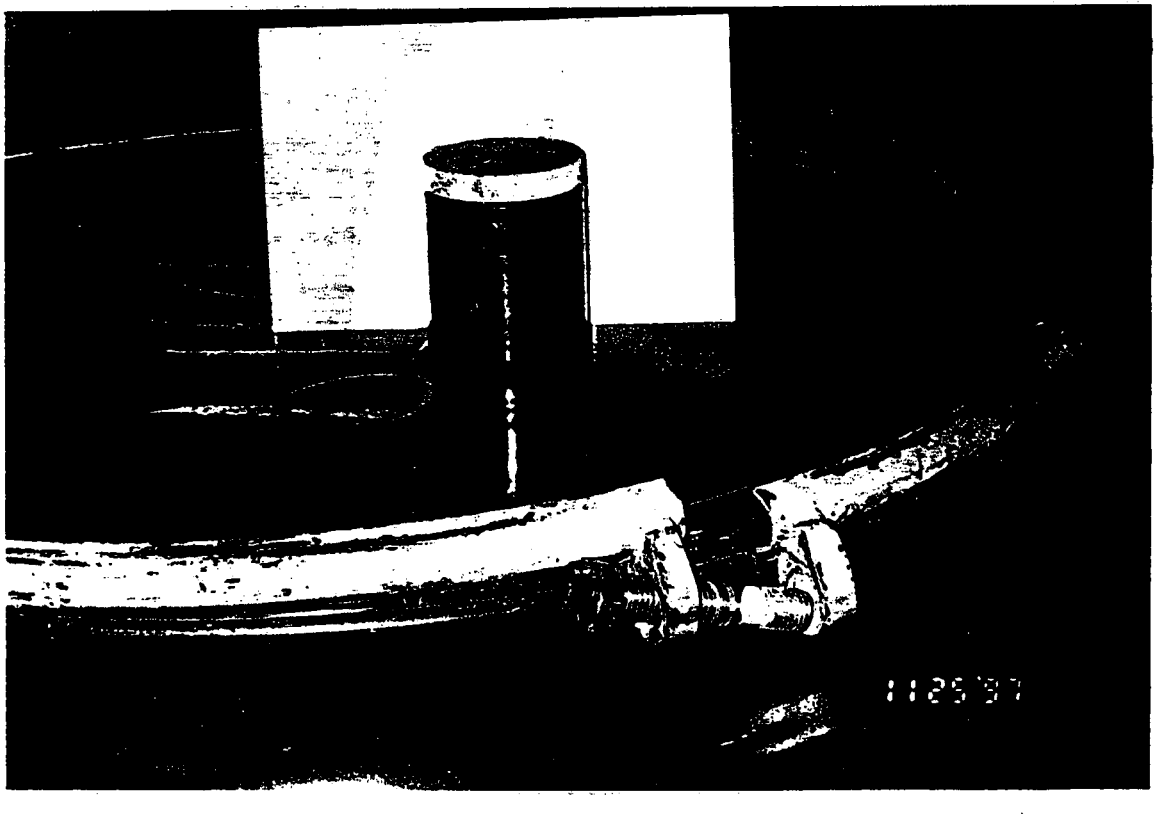


Photo #05: Drum 122: Lab. No. 204361

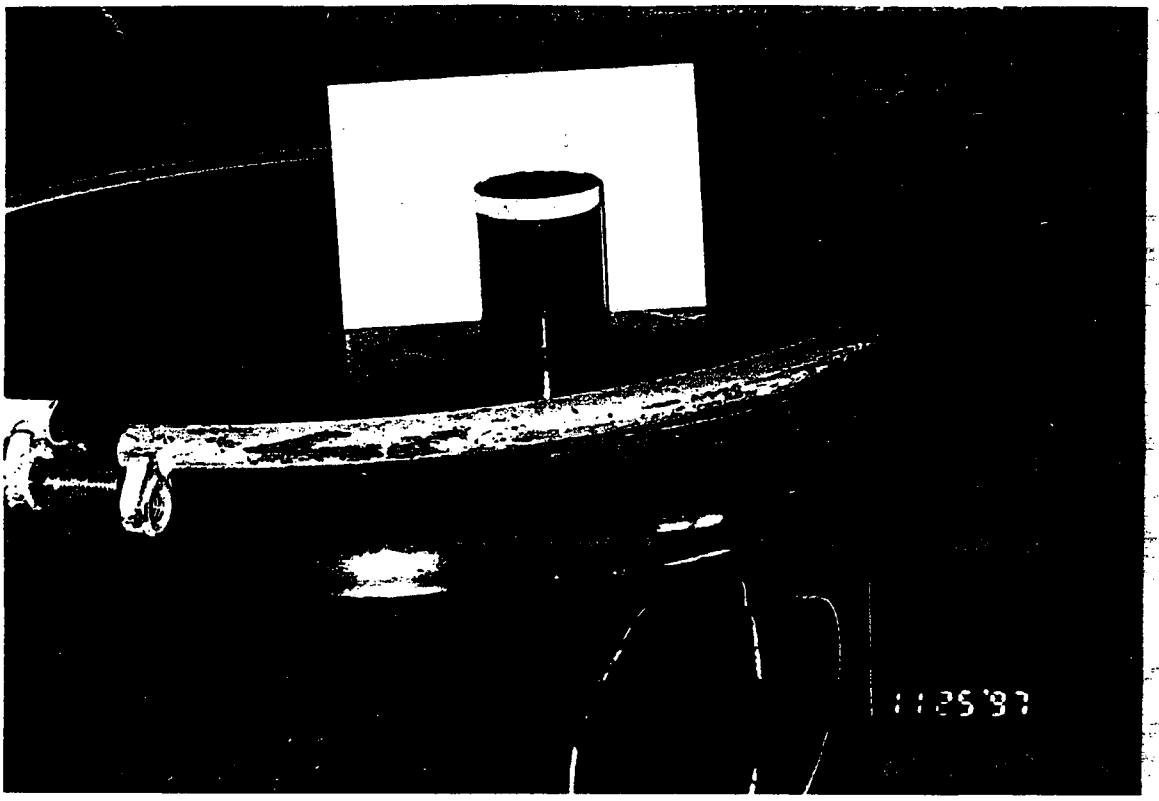


Photo #06: Drum 008: Lab No. 204362

Photo #07: Drum 009: Lab. No. 204363

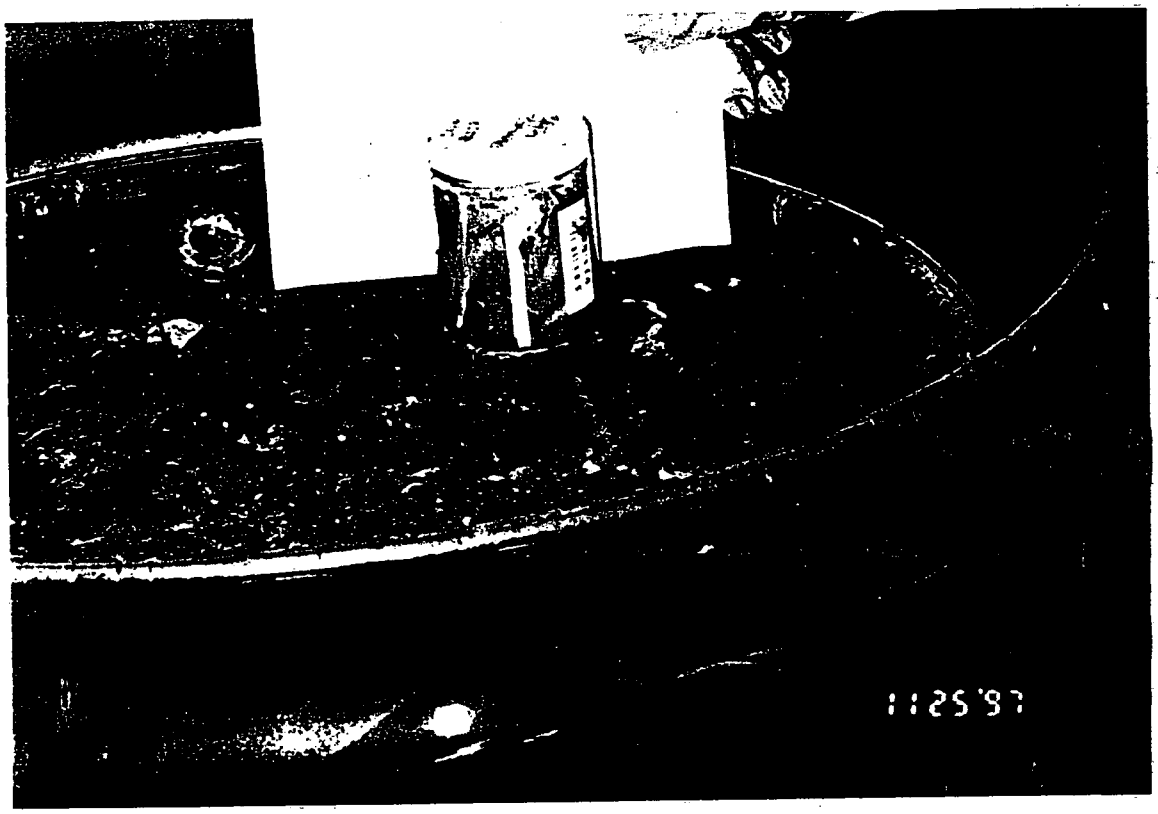


Photo #08: Drum 056: Lab No. 204364

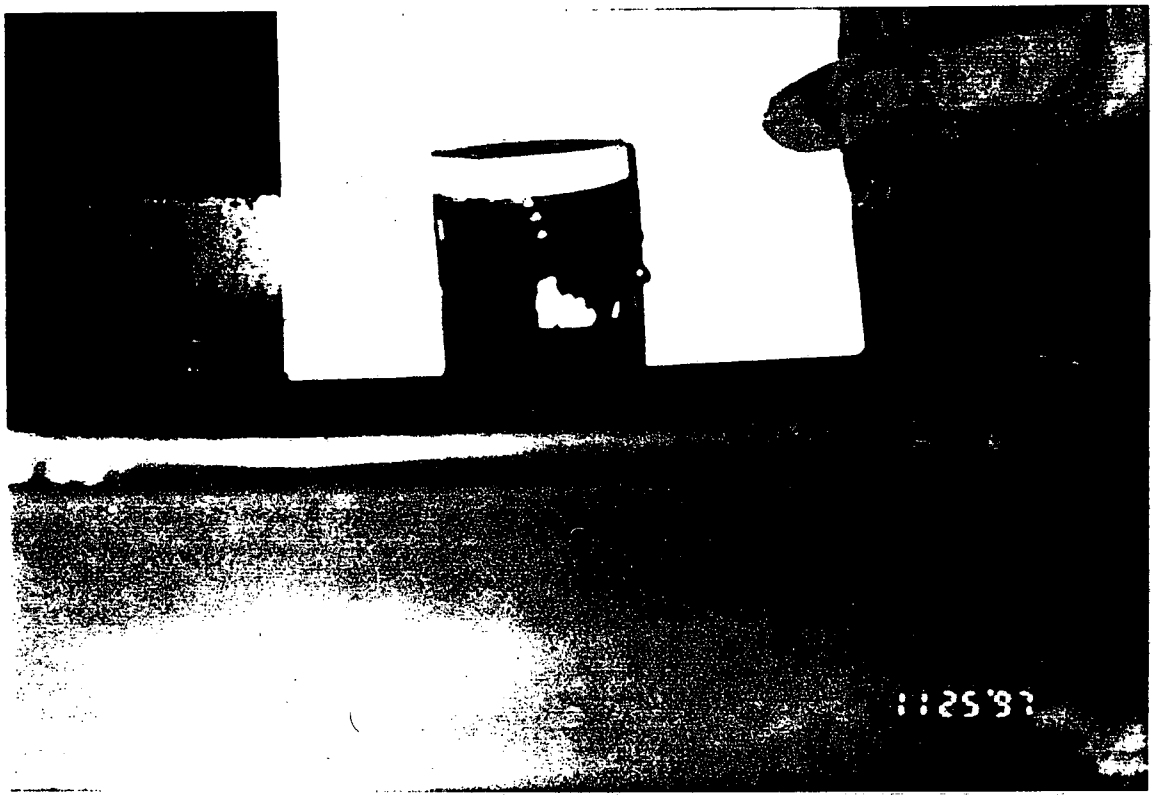


Photo #09: Drum 114: Lab. No. 204365

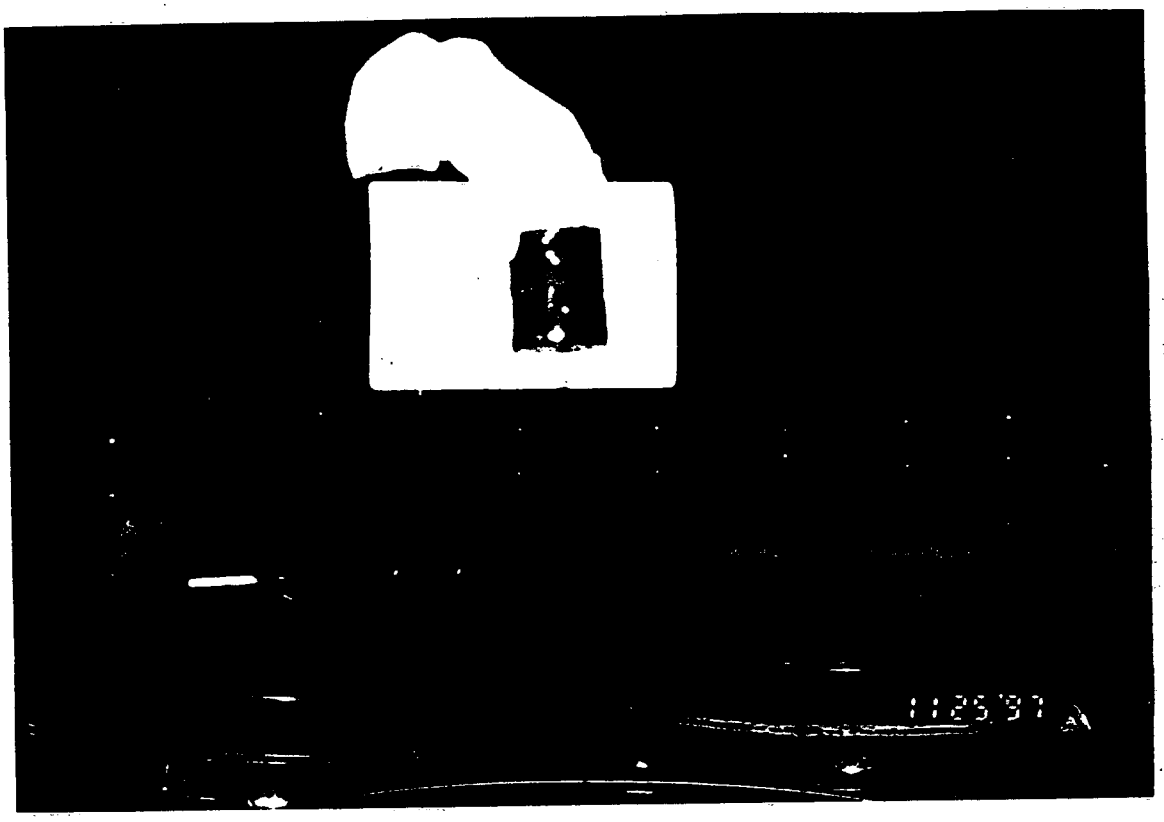


Photo #10: Drum 059: Lab No. 204366

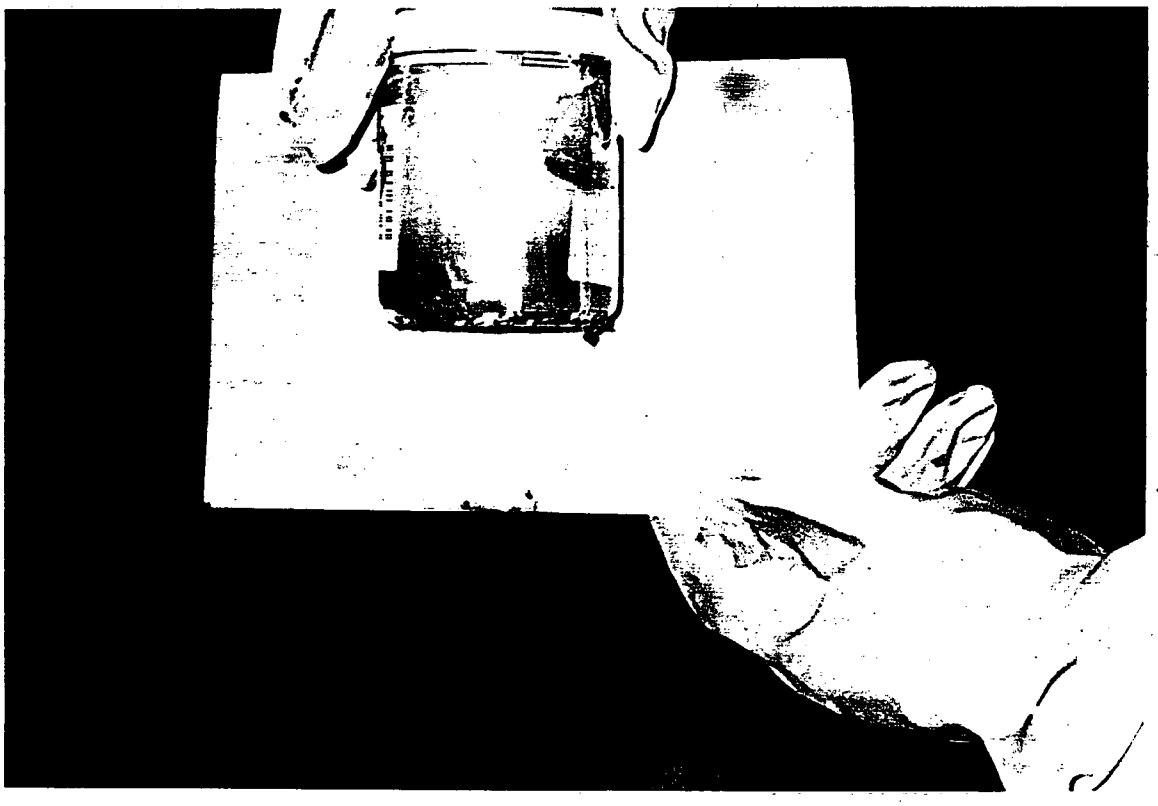


Photo #11: Drum 170: Lab. No. 204367

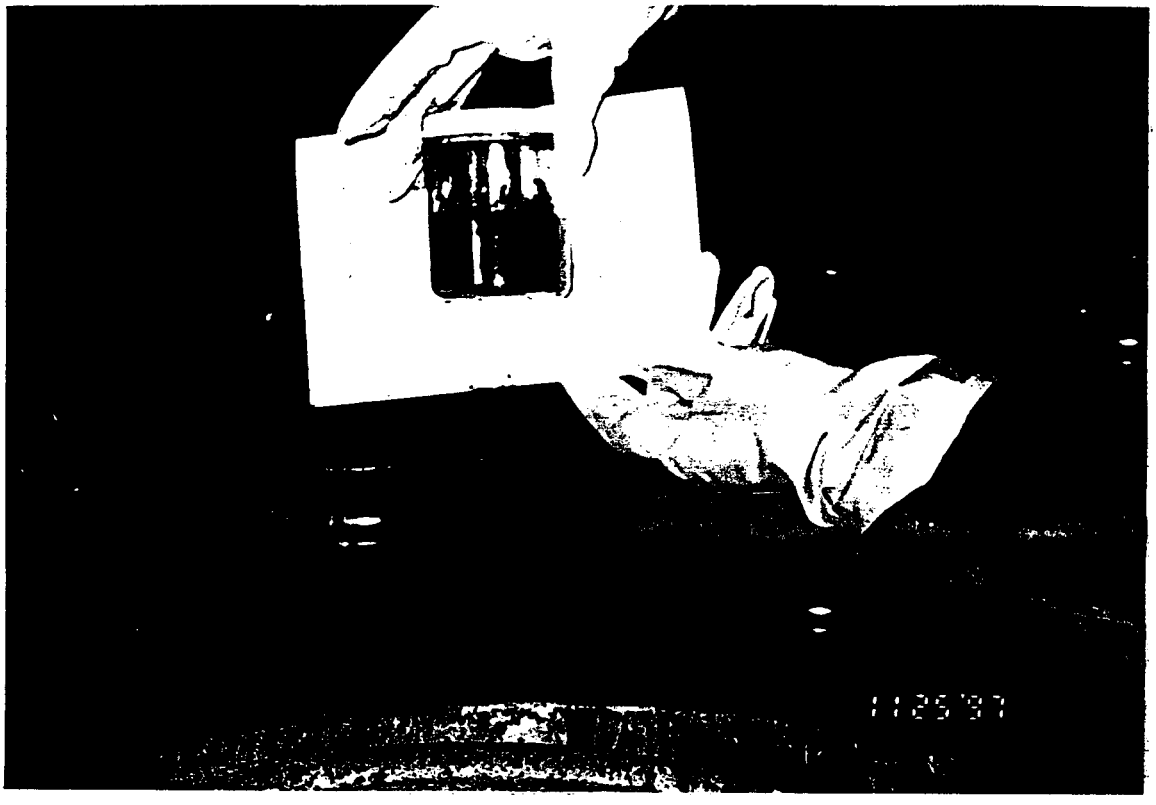


Photo #12: Drum 076: Lab No. 204368

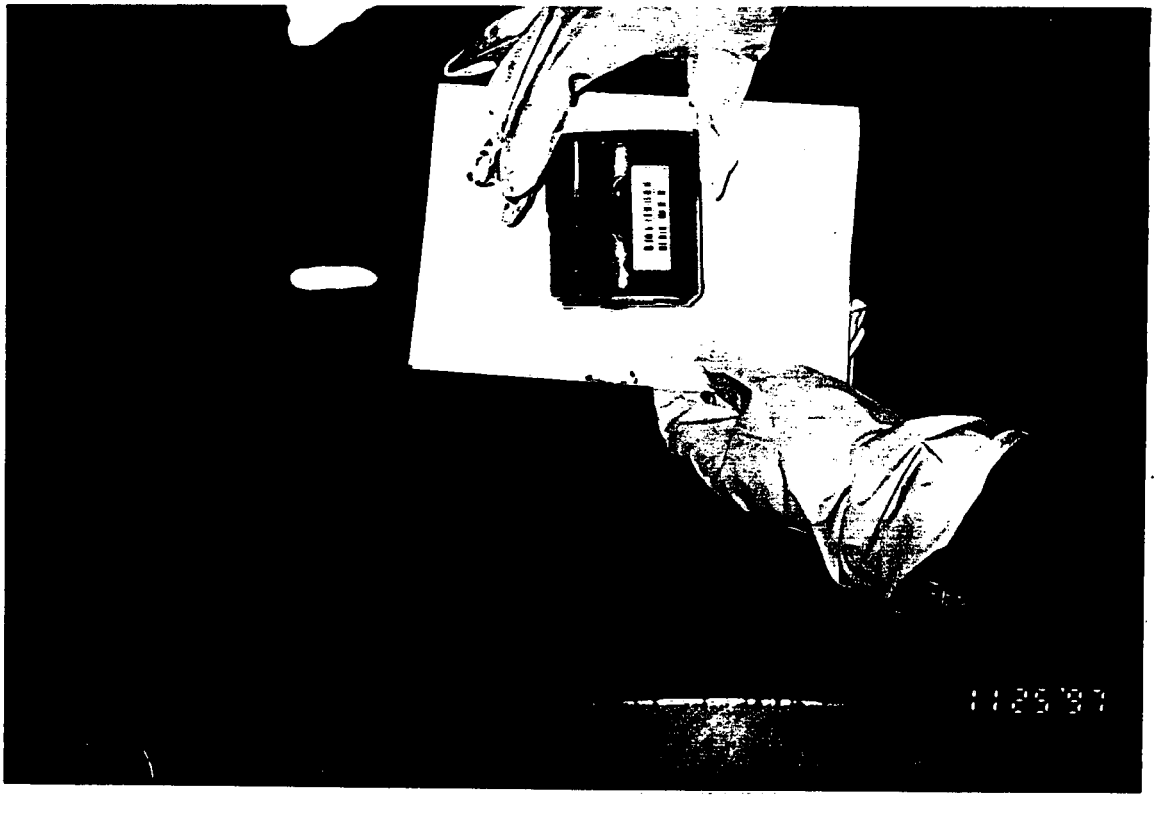


Photo #13: Drum 148: Lab. No. 204369

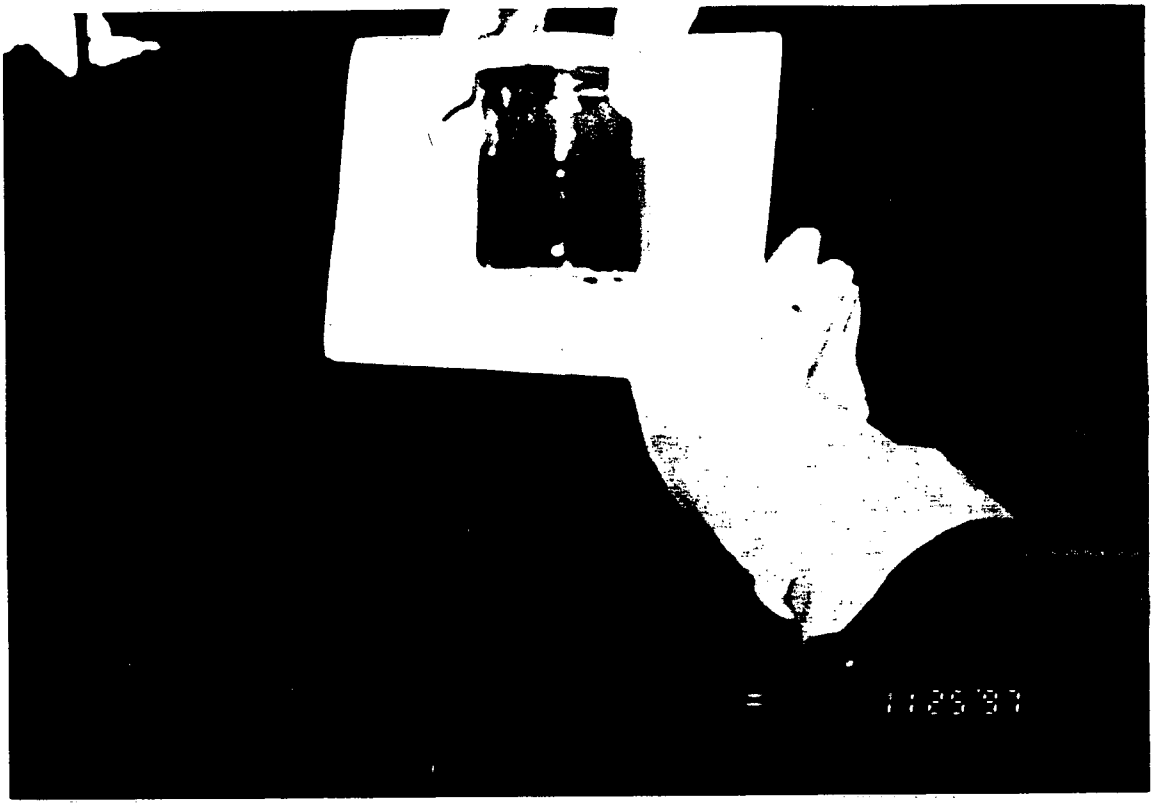


Photo #14: Drum 147: Lab No. 204370

Photo #15: Drum 142: Lab. No. 204371

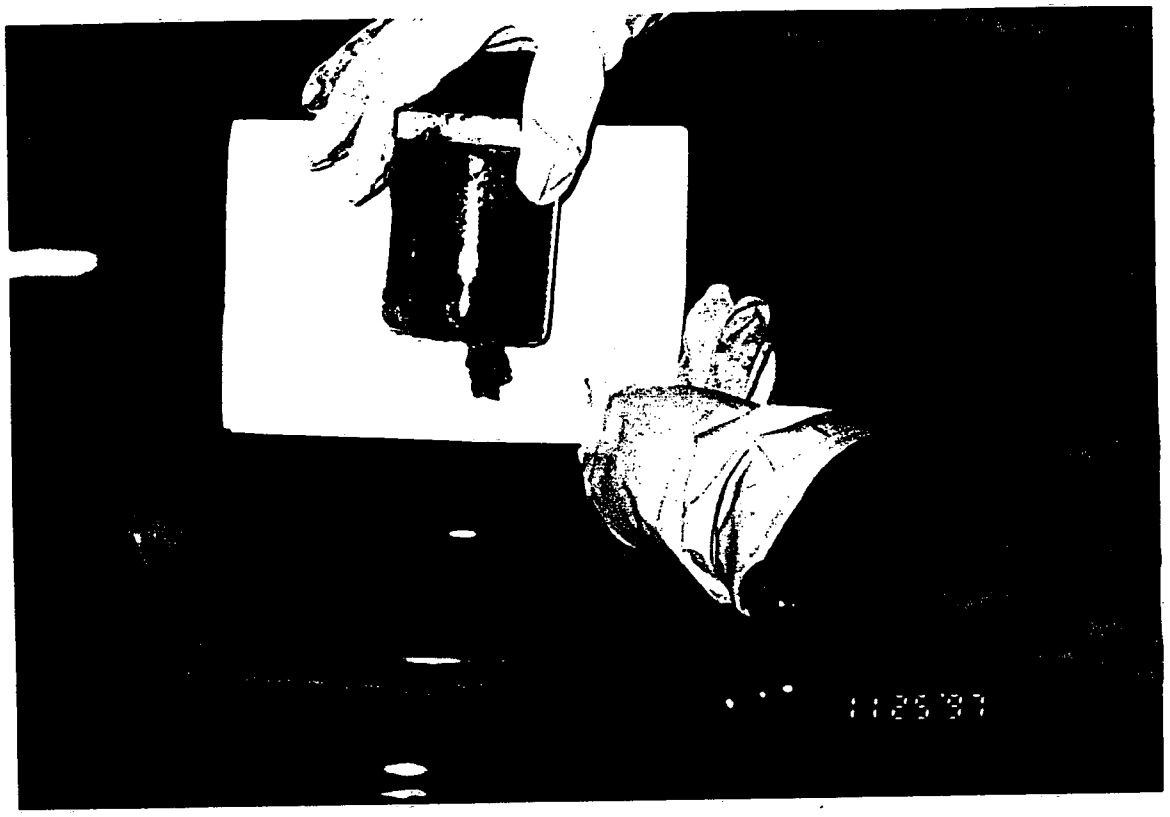


Photo #16: Drum 140: Lab No. 204372

Photo #17: Drum 139: Lab. No. 204373

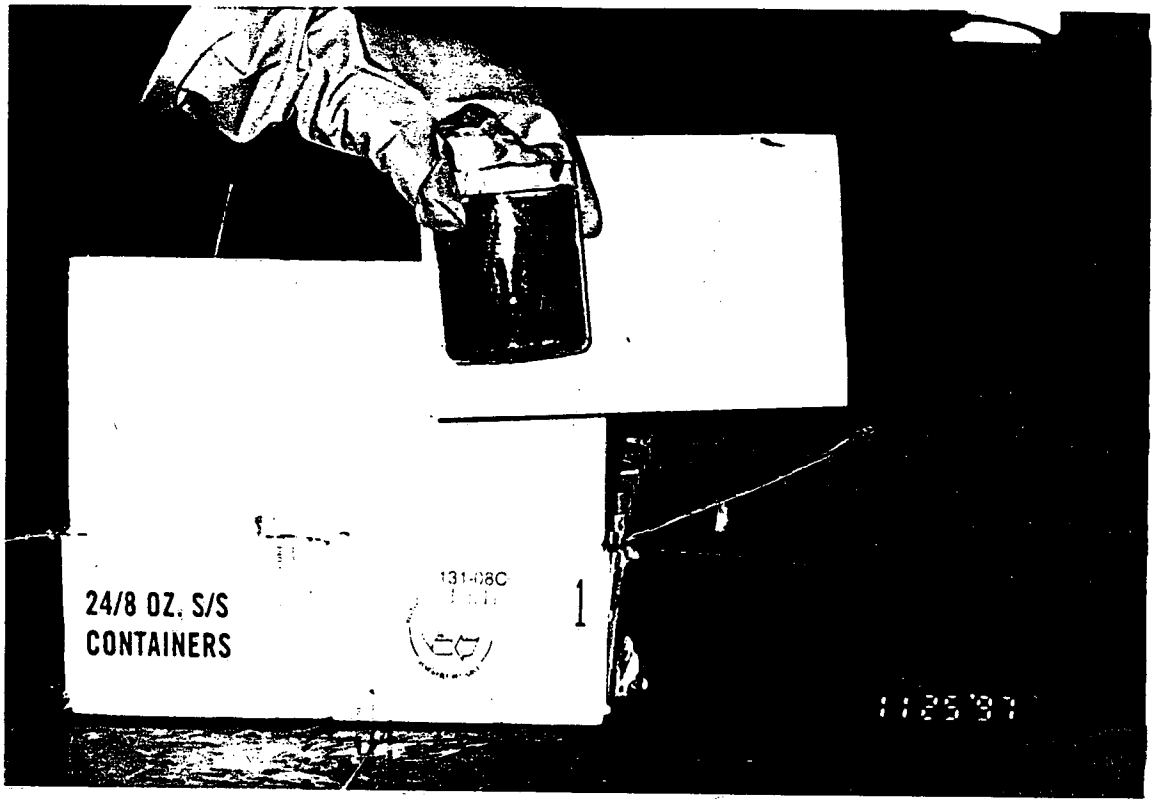


Photo #18: Drum 089: Lab No. 204374

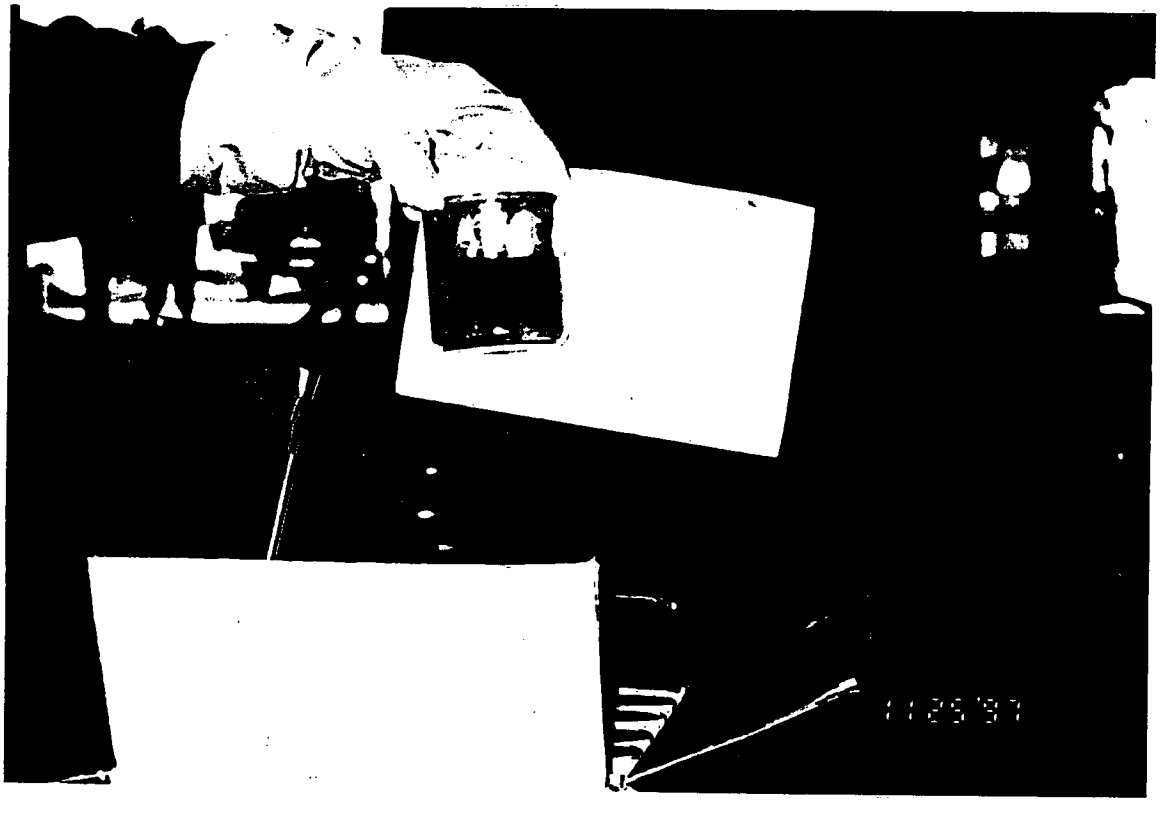


Photo #19: Drum 137: Lab. No. 204375

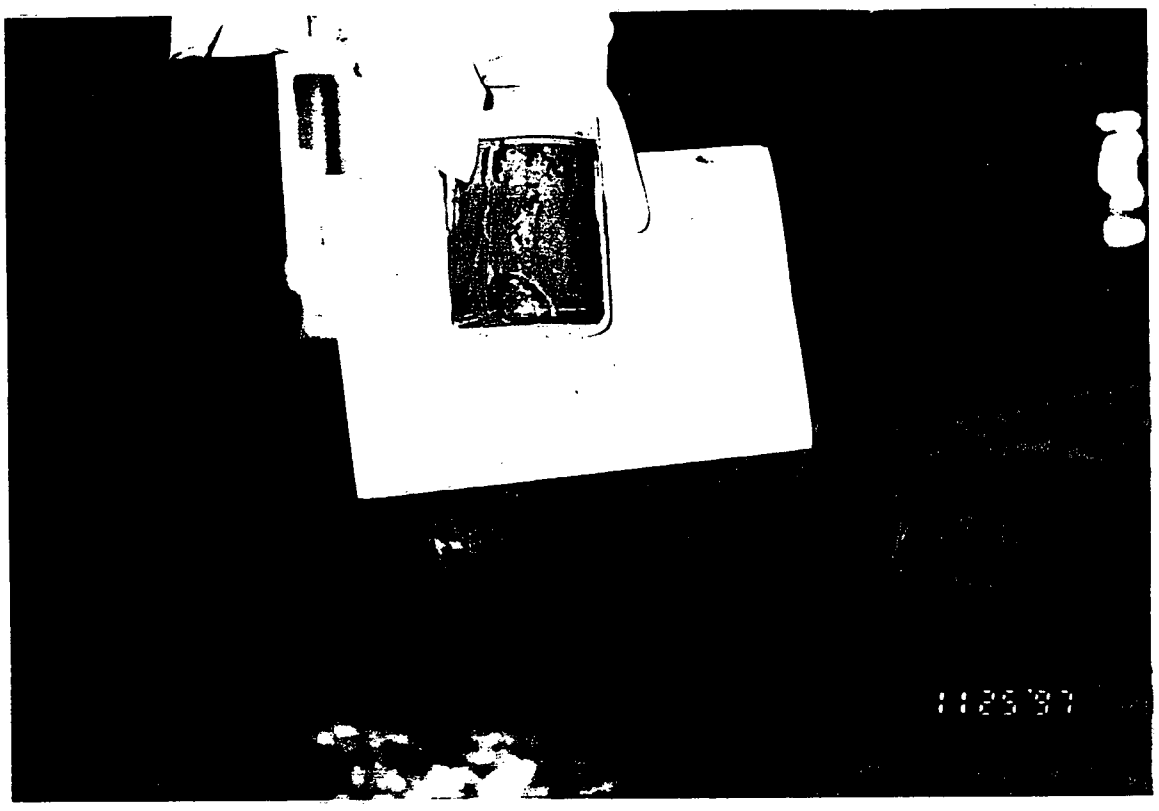


Photo #20: Drum 104: Lab No. 099617

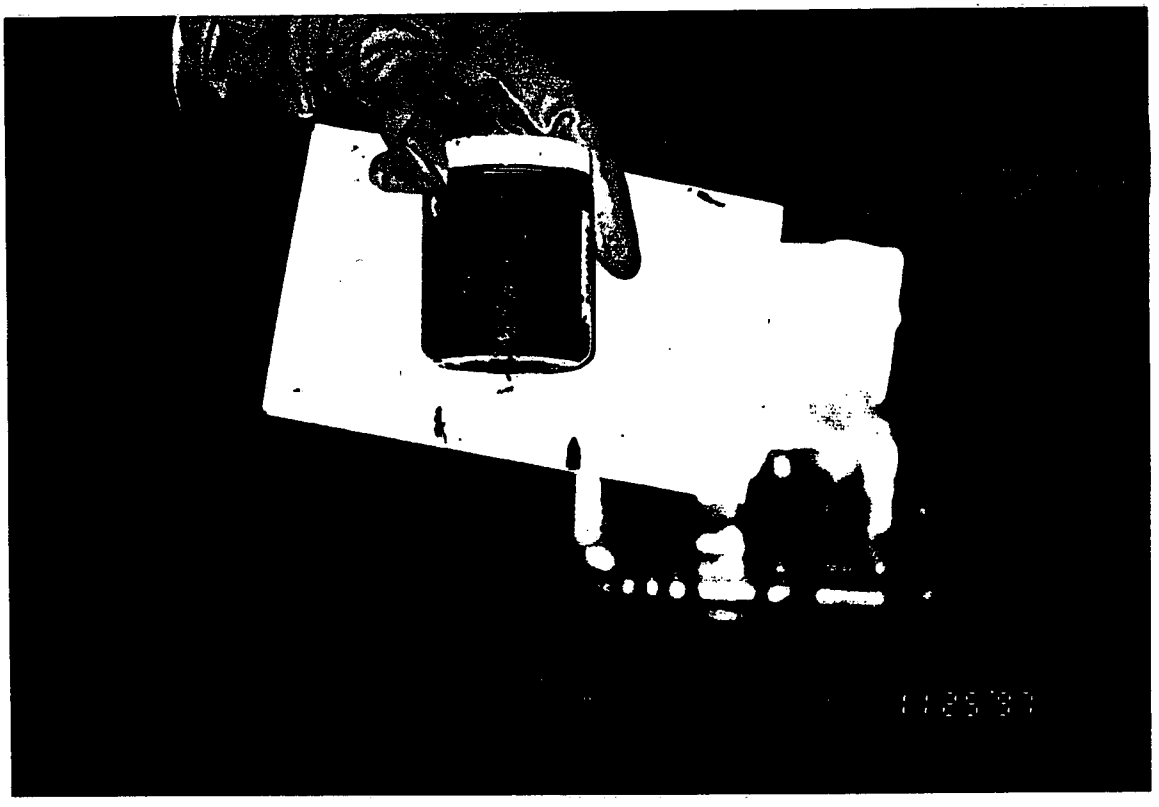


Photo #21: Drum 135: Lab. No. 099618

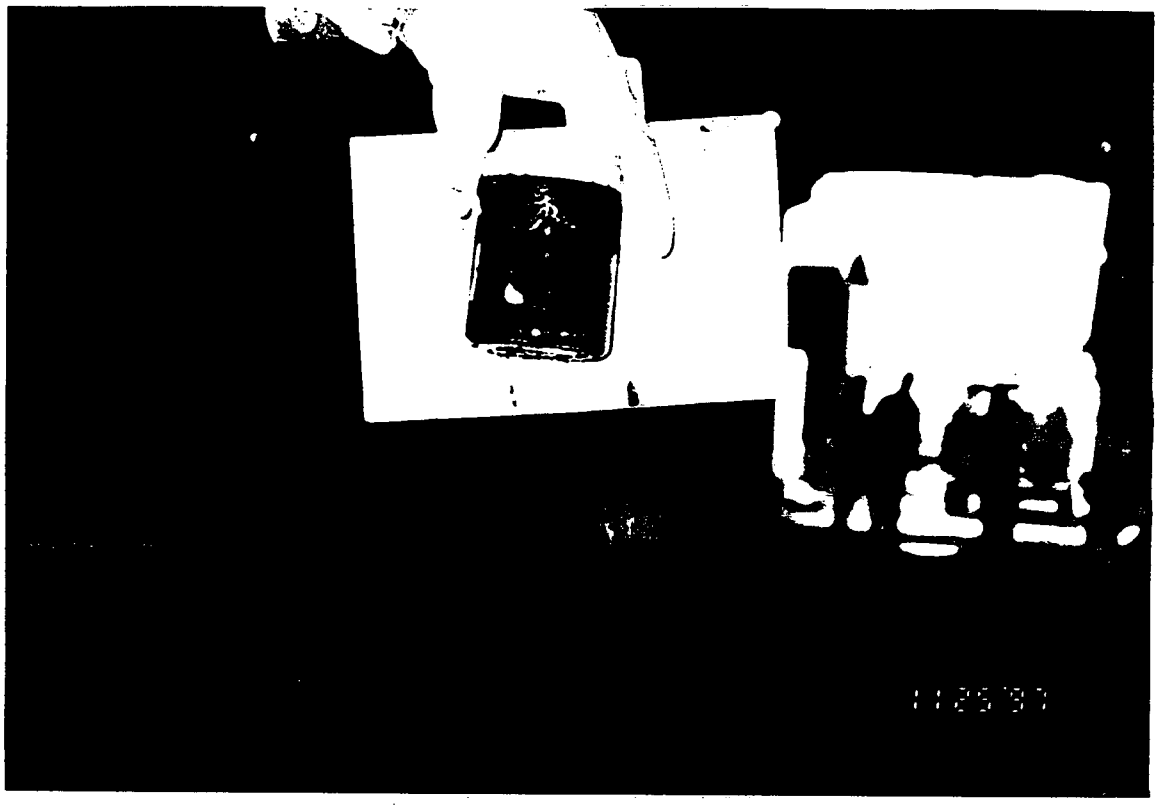


Photo #22: Drum 132: Lab No. 099619

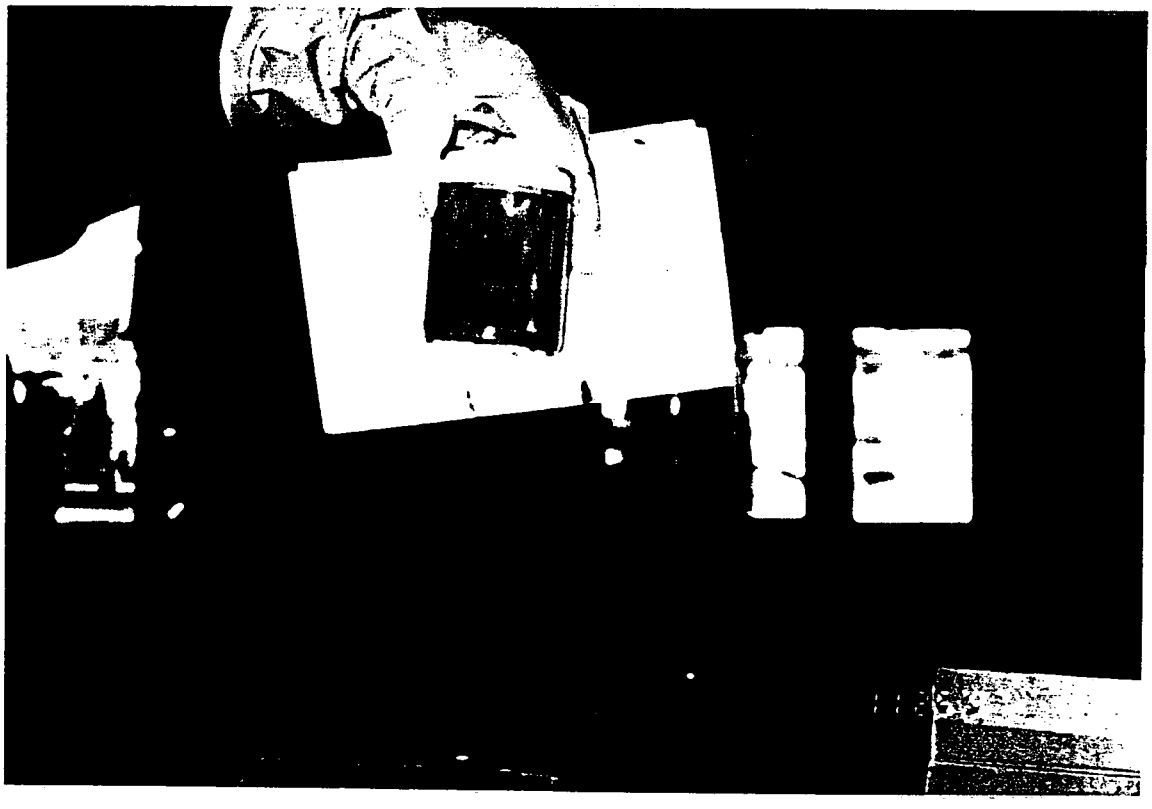


Photo #23: Drum 235: Lab. No. 099620

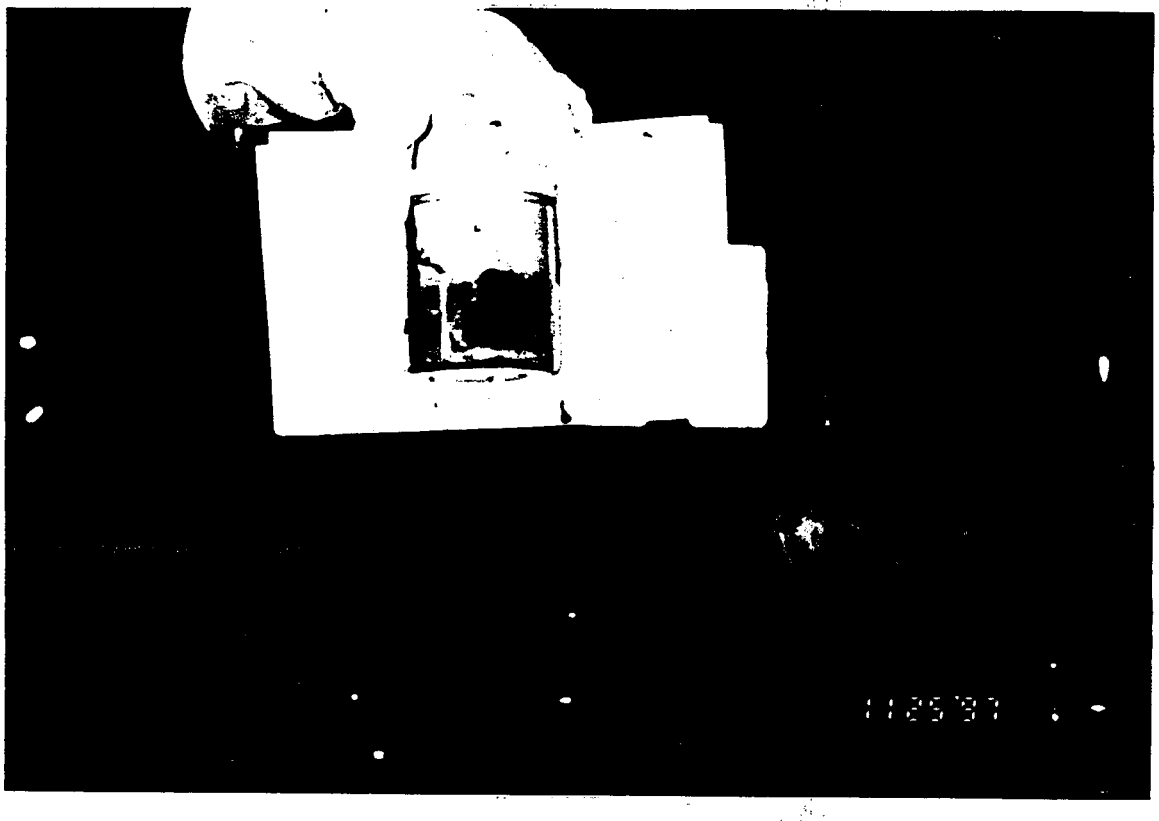
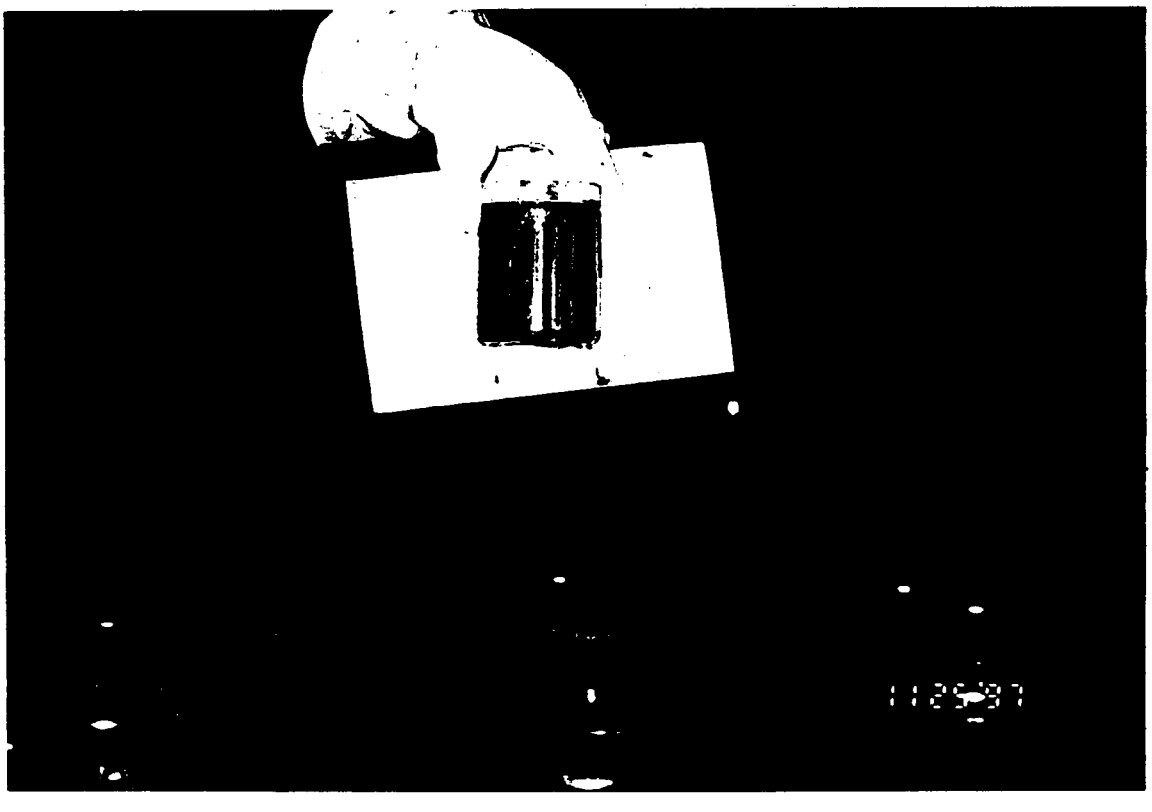


Photo #24: Drum 117: Lab No. 099621



FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name CENTRAL STEEL DRUM

Collector(s) TRAN/DUGAN Affiliation USEPA

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar (Manual)
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other COLIWASA

LDMS CODE O

DATA BASE CODE H

STA. TYPE CODE F

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
(Solvent) Extract (Other) PAINT)

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	Cleaning Procedure	Landfill	Industrial
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	Drum	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	Solvent Rinse:	Depth:	(Drum)
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		Municipal Treatment
Paper Cap	Methylene Chloride	Storage Tank	Influent
Teflon Cap	Other (Specify):	Top	Effluent-Cl
Foil Cap		Middle	Effluent-Non Cl
Other		Bottom	Sludge
		Truck	Ambient
Preservation	ESS glassware	Drum	Lake
Acid		Tank	Stream
Solvent		Other	Pond
Chemical			Ocean
Wet Ice		Wells	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

DRUM # 033

Remarks:

1-8oz. glass jar - 1 grit ability.

Samples to:

Bact	Bio	Chem ✓	Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number 204357

Type of Sample

Grab	Composite	
	Time	Space
✓		

Collection (Ending) Date

Yr	Mo	Day
9 7	1 1	2 5

Ending Time (24 Hr) 1107

Beginning Date

Yr	Mo	Day
9 7	1 1	2 5

Beginning Time (24 Hr) 1100

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split

☐ Yes ☒ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: CENTRAL STEEL DRUM

Collector(s): TRAN / DUGAN Affiliation: USEPA

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: COLL; WASA

LDMS CODE

DATA BASE CODE

STA. TYPE CODE

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
Solvent Extract Other (PAINT)

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	**Cleaning Procedure**	**Landfill**	**Industrial**
Glass Jar	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	Drum	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	**Solvent Rinse:**	Depth:	Drum
Cubitainer	Acetone	Other:	**Waste Pile**
Acetate Core	Hexane		**Municipal Treatment**
Paper Cap	Methylene Chloride	**Storage Tank**	Influent
Teflon Cap	Other (Specify):	Top	Effluent-Cl
Foil Cap	E.S.S glasswware	Middle	Effluent-Non Cl
Other		Bottom	Sludge
Preservation		**Truck**	Ambient
Acid		Drum	Lake
Solvent		Tank	Stream
Chemical		Other	Pond
Wet Ice			Ocean
Dry Ice		**Wells**	Estuary
Ambient		Monitoring	
Other		Production	
		Drinking	
		Private	

Sample Location Description:

Drum # 066

Remarks:

1 - 8oz Jar: ignitibility

Samples to:

Bact	Bio	Chem	Other
		✓	

Station No.:

Sample Depth (Ft.)/Fac. Loc. Code:

Lab Number: 204358

Type of Sample

Grab	Composite	
	Time	Space
✓		

Collection (Ending) Date

Yr	Mo	Day
97	11	25

Ending Time (24 Hr): 1114

Beginning Date

Yr	Mo	Day
97	11	25

Beginning Time (24 Hr): 1107

pH:

Sample Temp. (°C):

DO (mg/l):

Cond. (uMHOS/CM):

Salinity(‰):

Sample Split

☐ Yes ☑ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name CENTRAL STEEL DRUM

Collector(s) TRAN/DUGAN Affiliation US EPA

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar **Manual**
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other COLIWASA

LDMS CODE O

DATA BASE CODE H

STA. TYPE CODE F

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological

Solvent Extract **Other** (PAINT)

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	Cleaning Procedure	Landfill	Industrial
Glass Jar	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	Drum	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	Solvent Rinse:	Depth:	**Drum**
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		Municipal Treatment
Paper Cap	Methylene Chloride	Storage Tank	Influent
Teflon Cap	Other (Specify):	Top	Effluent-Cl
Foil Cap	ESS glassware	Middle	Effluent-Non Cl
Other		Bottom	Sludge
Preservation		Truck	Ambient
Acid		Drum	Lake
Solvent		Tank	Stream
Chemical		Other	Pond
Wet Ice		Wells	Ocean
Dry Ice		Monitoring	Estuary
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

DRUM #068

Remarks:

1-8oz. glass jar - Ignitability.

Samples to: Bact | Bio | Chem ✓ | Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number **204359**

Type of Sample: Grab ✓ | Composite: Time | Space

Collection (Ending) Date: Yr 91 Mo 11 Day 23

Ending Time (24 Hr): 1121

Beginning Date: Yr 91 Mo 11 Day 23

Beginning Time (24 Hr): 1114

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split

☐ Yes ☒ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: Central Steel Drum

Collector(s): Tran/Dugan Affiliation: USEPA

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar (Manual)
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: Coliwasa

LDMS CODE

DATA BASE CODE

STA. TYPE CODE

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological

(Solvent) Extract (Other) PAINT)

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	**Cleaning Procedure**	**Landfill**	**Industrial**
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	Drum	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	**Solvent Rinse:**	Depth:	(Drum)
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		**Municipal Treatment**
Paper Cap	Methylene Chloride	**Storage Tank**	Influent
Teflon Cap	Other (Specify):	Top	Effluent-Cl
Foil Cap		Middle	Effluent-Non Cl
Other		Bottom	Sludge
	6 S.S glassware	**Truck**	Ambient
Preservation		Drum	Lake
Acid		Tank	Stream
Solvent		Other	Pond
Chemical			Ocean
Wet Ice		**Wells**	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

Drum # 119

Remarks:

1-8oz Jar: Ignitibility

Samples to: Bact | Bio | Chem (✓) | Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number: 204360

Type of Sample: Grab (✓) Composite: Time | Space

Collection (Ending) Date: Yr 9 7 Mo 1 1 Day 2 5

Ending Time (24 Hr): 1 1 2 8

Beginning Date: Yr 9 7 Mo 1 1 Day 2 5

Beginning Time (24 Hr): 1 1 2 1

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split: ☐ Yes ☑ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name CENTRAL STEEL DRUM

Collector(s) TRAN/DUEAN Affiliation US EPA

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar (Manual)

Niskin Net Seine Trawl Bucket

Trowel Cream Dipper

Automatic

Other COLIWASA

LDMS CODE 0

DATA BASE CODE 11

STA. TYPE CODE F

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological

(Solvent) Extract (Other) PAINT)

BOD — Seed Supplied ☐ Yes ☒ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	Cleaning Procedure	Landfill	Industrial
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	Drum	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	Solvent Rinse:	Depth:	(Drum)
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		Municipal Treatment
Paper Cap	Methylene Chloride	Storage Tank	Influent
Teflon Cap	Other (Specify):	Top	Effluent-Cl
Foil Cap	ESS glassware	Middle	Effluent-Non Cl
Other		Bottom	Sludge
		Truck	Ambient
Preservation		Drum	Lake
Acid		Tank	Stream
Solvent		Other	Pond
Chemical			Ocean
Wet Ice		Wells	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

DRUM # 122

Remarks:

1-8oz. glass jar - Ignitability.

Samples to: Bact | Bio | (Chem) | Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number 204361

Type of Sample: (Grab) Composite: Time | Space

Collection (Ending) Date: Yr 97 Mo 11 Day 25

Ending Time (24 Hr) 1135

Beginning Date: Yr 97 Mo 11 Day 25

Beginning Time (24 Hr) 1128

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split ☐ Yes ☒ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: CENTRAL STEEL DRUM

Collector(s): MAW / DUGAN Affiliation: US EPA

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: COLIWASA

LDMS CODE

DATA BASE CODE

STA. TYPE CODE

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
Solvent Extract Other (PAINT)

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	**Cleaning Procedure**	**Landfill**	**Industrial**
Glass Jar	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	Drum	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	**Solvent Rinse:**	Depth:	Drum
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		**Municipal Treatment**
Paper Cap	Methylene Chloride	**Storage Tank**	Influent
Teflon Cap	Other (Specify):	Top	Effluent-Cl
Foil Cap	6.5.5 Glassware	Middle	Effluent-Non Cl
Other		Bottom	Sludge
		Truck	Ambient
Preservation		Drum	Lake
Acid		Tank	Stream
Solvent		Other	Pond
Chemical			Ocean
Wet Ice		**Wells**	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

DRUM # 008

Remarks:

1-8oz JAR : IGNITABILITY

Samples to: Bact | Bio | Chem ✓ | Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number: **204362**

Type of Sample: Grab ✓ | Composite: Time | Space

Collection (Ending) Date: Yr 97 Mo 11 Day 25

Ending Time (24 Hr): 1142

Beginning Date: Yr 97 Mo 11 Day 25

Beginning Time (24 Hr): 1135

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split ☐ Yes ☐ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: CENTRAL STEEL DRUM

Collector(s): TRAN / DUGAN Affiliation: US EPA

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar (Manual)

Niskin Net Seine Trawl Bucket

Trowel Cream Dipper

Automatic

Other: COLIWASA

LDMS CODE: C

DATA BASE CODE: H

STA. TYPE CODE: F

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological

(Solvent) Extract (Other) PAINT

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)

Container	Cleaning Procedure	Preservation
(Glass Jar)	Detergent Wash	Acid:
Plastic Jar	Water Rinse	Solvent:
Metal	Acid Rinse	Chemical:
POA Vial	Solvent Rinse:	Wet Ice
Cubitainer	Acetone	Dry Ice
Acetate Core	Hexane	Ambient
Paper Cap	Methylene Chloride	Other:
Teflon Cap	Other (Specify):	
Foil Cap	ESS gloves ice	
Other:		

Sample Source Type (Circle)

Landfill	Industrial
Leachate	Effluent
Drum	Process Stream
Test Well	Holding Pond
Depth:	(Drum)
Other:	Waste Pile
Storage Tank	Municipal Treatment
Top	Influent
Middle	Effluent-Cl
Bottom	Effluent-Non Cl
Truck	Sludge
Drum	Ambient
Tank	Lake
Other:	Stream
Wells	Pond
Monitoring	Ocean
Production	Estuary
Drinking	
Private	

Sample Location Description:

DRUM # 009

Remarks:

1-8oz glass jar - Ignitability.

Samples to: Bact | Bio | Chem ✓ | Other

Station No.:

Sample Depth (Ft.)/Fac. Loc. Code:

Lab Number: 204363

Type of Sample: Grab ✓ Composite: Time Space

Collection (Ending) Date: Yr 91 Mo 11 Day 25

Ending Time (24 Hr): 1149

Beginning Date: Yr 91 Mo 11 Day 25

Beginning Time (24 Hr): 1142

pH:

Sample Temp. (°C):

DO (mg/l):

Cond. (uMHOS/CM):

Salinity(‰):

Sample Split: ☐ Yes ☒ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: Central Steel Drum

Collector(s): Trow / Dugan Affiliation: US EPA

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: Coliwasa

LDMS CODE

DATA BASE CODE

STA. TYPE CODE

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
Solvent Extract Other (PAINT)

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	Cleaning Procedure	Landfill	Industrial
~~Glass Jar~~	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	Drum	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	Solvent Rinse:	Depth:	Drum
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		Municipal Treatment
Paper Cap	Methylene Chloride	Storage Tank	Influent
Teflon Cap	Other (Specify):	Top	Effluent-Cl
Foil Cap	E.S.S Glasswares	Middle	Effluent-Non Cl
Other		Bottom	Sludge
Preservation		Truck	Ambient
Acid		Drum	Lake
Solvent		Tank	Stream
Chemical		Other	Pond
Wet Ice		Wells	Ocean
Dry Ice		Monitoring	Estuary
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

Drum # 056

Remarks:

1-8oz JAR: ignitibility

Samples to: Bact | Bio | Chem ✓ | Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number: 204364

Type of Sample: Grab ✓ Composite: Time | Space

Collection (Ending) Date: Yr 97 Mo 11 Day 25

Ending Time (24 Hr): 1156

Beginning Date: Yr 97 Mo 11 Day 25

Beginning Time (24 Hr): 1149

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split: ☐ Yes ☐ No ✓

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name CENTRAL STEEL DRUM

Collector(s) TRAN/DUGAN Affiliation US EPA

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar (Manual)
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other COLIWASA

LDMS CODE 0

DATA BASE CODE 14

STA. TYPE CODE F

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological

(Solvent) Extract (Other) PAINT)

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	Cleaning Procedure	Landfill	Industrial
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	Drum	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	Solvent Rinse:	Depth:	(Drum)
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		Municipal Treatment
Paper Cap	Methylene Chloride	Storage Tank	Influent
Teflon Cap	Other (Specify):	Top	Effluent-Cl
Foil Cap		Middle	Effluent-Non Cl
Other	ESS glassware	Bottom	Sludge
		Truck	Ambient
Preservation		Drum	Lake
Acid		Tank	Stream
Solvent		Other	Pond
Chemical			Ocean
Wet Ice		Wells	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

DRUM #114

Remarks:

1-8oz. glass jar - Ignitability.

Samples to: Bact | Bio | Chem ✓ | Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number 204365

Type of Sample: Grab ✓ Composite (Time | Space)

Collection (Ending) Date: Yr 97 Mo 11 Day 25

Ending Time (24 Hr) 1203

Beginning Date: Yr 97 Mo 11 Day 25

Beginning Time (24 Hr) 1156

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split

☐ Yes ☒ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY · Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: Central Steel Drum

Collector(s): Tran / Dugan Affiliation: USEPA

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar (Manual)
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: Coliwasa

LDMS CODE: _____

DATA BASE CODE: _____

STA. TYPE CODE: _____

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
Solvent Extract (Other) Paint)

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	Cleaning Procedure	Landfill	Industrial
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	Drum	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	Solvent Rinse:	Depth:	(Drum)
Cubitainer	Acetone	Other: _____	Waste Pile
Acetate Core	Hexane	_____	Municipal Treatment
Paper Cap	Methylene Chloride	Storage Tank	Influent
Teflon Cap	Other (Specify):	Top	Effluent-CI
Foil Cap		Middle	Effluent-Non CI
Other _____	EDS	Bottom	Sludge
_____	Glassware	Truck	Ambient
Preservation		Drum	Lake
Acid _____		Tank	Stream
Solvent _____		Other _____	Pond
Chemical _____		_____	Ocean
Wet Ice		Wells	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other _____		Drinking	
_____		Private	

Sample Location Description:

Drum # : 059

Remarks:

1-Foz jar : ignitibility

Samples to:

Bact	Bio	Chem	Other
		✓	

Station No.: _____

Sample Depth (Ft.)/Fac. Loc. Code: _____

Lab Number: 204366

Type of Sample

Grab	Composite	
	Time	Space
✓		

Collection (Ending) Date: Yr 97 Mo 11 Day 23

Ending Time (24 Hr): 1210

Beginning Date: Yr 97 Mo 11 Day 23

Beginning Time (24 Hr): 1203

pH: _____

Sample Temp. (°C): _____

DO (mg/l): _____

Cond. (uMHOS/CM): _____

Salinity(‰): _____

Sample Split

☐ Yes ☑ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name CENTRAL STEEL DRUM

Collector(s) TRAN/DUEAN Affiliation USEPA

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar **Manual**
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other COLIWASA

LDMS CODE 0

DATA BASE CODE H

STA. TYPE CODE F

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
Solvent Extract **Other** (PAINT)

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)

Container	Cleaning Procedure	Preservation
~~Glass Jar~~	Detergent Wash	Acid
Plastic Jar	Water Rinse	Solvent
Metal	Acid Rinse	Chemical
POA Vial	Solvent Rinse:	Wet Ice
Cubitainer	Acetone	Dry Ice
Acetate Core	Hexane	Ambient
Paper Cap	Methylene Chloride	Other
Teflon Cap	Other (Specify):	
Foil Cap	ESS glassware	
Other		

Sample Source Type (Circle)

Landfill	Industrial
Leachate	Effluent
Drum	Process Stream
Test Well	~~Holding Pond~~
Depth:	Drum
Other:	Waste Pile
	Municipal Treatment
Storage Tank	Influent
Top	Effluent-Cl
Middle	Effluent-Non Cl
Bottom	Sludge
Truck	Ambient
Drum	Lake
Tank	Stream
Other	Pond
	Ocean
Wells	Estuary
Monitoring	
Production	
Drinking	
Private	

Sample Location Description:

DRUM #170

Remarks:

1-8 oz. glass jar - Ignitability.

Samples to: Bact | Bio | Chem ✓ | Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number 204367

Type of Sample: Grab ✓ Composite (Time | Space)

Collection (Ending) Date: Yr 87 Mo 11 Day 25

Ending Time (24 Hr) 1217

Beginning Date: Yr 87 Mo 11 Day 25

Beginning Time (24 Hr) 1210

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split ☐ Yes ☒ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: Central Steel Drum

Collector(s): Tran / Dugan Affiliation: USEPA

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar (Manual)
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: Coliwasa

LDMS CODE: _____

DATA BASE CODE: _____

STA. TYPE CODE: _____

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
(Solvent) Extract (Other) Paint)

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	Cleaning Procedure	Landfill	Industrial
~~Glass Jar~~	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	Drum	Process Stream
Metal	Acid Rinse	Test Well	(Holding Pond)
POA Vial	Solvent Rinse:	Depth:	(Drum)
Cubitainer	Acetone	Other: _____	Waste Pile
Acetate Core	Hexane	_____	Municipal Treatment
Paper Cap	Methylene Chloride	Storage Tank	Influent
Teflon Cap	Other (Specify):	Top	Effluent-Cl
Foil Cap	E.S.S. Glasswash	Middle	Effluent-Non Cl
Other _____		Bottom	Sludge
_____		Truck	Ambient
Preservation		Drum	Lake
Acid _____		Tank	Stream
Solvent _____		Other _____	Pond
Chemical _____		_____	Ocean
Wet Ice		Wells	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other _____		Drinking	
_____		Private	

Sample Location Description:

Drum # 076

Remarks:

1 - 8oz Jar: Ignitibility

Form: FTB RPD-11-82-2

Samples to: Bact | Bio | Chem (✓) | Other

Station No.:

Sample Depth (Ft.)/Fac. Loc. Code:

Lab Number: 204368

Type of Sample: Grab (/) | Composite: Time | Space

Collection (Ending) Date: Yr 97 | Mo 11 | Day 25

Ending Time (24 Hr): 1224

Beginning Date: Yr 97 | Mo 11 | Day 25

Beginning Time (24 Hr): 1217

pH:

Sample Temp. (°C):

DO (mg/l):

Cond. (uMHOS/CM):

Salinity(‰):

Sample Split: ☐ Yes ☑ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: CENTRAL STEEL DRUM

Collector(s): TRAN/DUEAN Affiliation: US EPA

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar (Manual)
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: COLIWASA

LDMS CODE: D

DATA BASE CODE: H

STA. TYPE CODE: F

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
(Solvent) Extract (Other) PAINT)

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	Cleaning Procedure	Landfill	Industrial
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	Drum	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	Solvent Rinse:	Depth:	(Drum)
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane)		Municipal Treatment
Paper Cap	Methylene Chloride	Storage Tank	Influent
Teflon Cap	Other (Specify):	Top	Effluent-Cl
Foil Cap	ESS glassware	Middle	Effluent-Non Cl
Other		Bottom	Sludge
Preservation		Truck	Ambient
Acid		Drum	Lake
Solvent		Tank	Stream
Chemical		Other	Pond
Wet Ice		Wells	Ocean
Dry Ice		Monitoring	Estuary
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

DRUM # 148

Remarks:

1 - 8 oz. glass jar - 1 grit ability.

Samples to: Bact | Bio | (Chem ✓) | Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number: 204369

Type of Sample: Grab (✓) Composite: Time | Space

Collection (Ending) Date: Yr 87 Mo 11 Day 25

Ending Time (24 Hr): 1231

Beginning Date: Yr 87 Mo 11 Day 25

Beginning Time (24 Hr): 1224

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split ☐ Yes (☒) No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: CENTRAL STEEL DRUM

Collector(s): TRAN/DUGAN Affiliation: US EPA

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar (Manual)

Niskin Net Seine Trawl Bucket

Trowel Cream Dipper

Automatic

Other: COLIWASA

LDMS CODE

DATA BASE CODE

STA. TYPE CODE

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological

(Solvent) Extract (Other) (PAINT)

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	Cleaning Procedure	Landfill	Industrial
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	Drum	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	Solvent Rinse:	Depth: (Drum)	
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		Municipal Treatment
Paper Cap	Methylene Chloride	Storage Tank	Influent
Teflon Cap	Other (Specify):	Top	Effluent-Cl
Foil Cap	E.S.S. GLASSWARE	Middle	Effluent-Non Cl
Other		Bottom	Sludge
		Truck	Ambient
Preservation		Drum	Lake
Acid		Tank	Stream
Solvent		Other	Pond
Chemical			Ocean
Wet Ice		Wells	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

Drum # 147

Remarks:

1-8oz JAR: IGNITIBILITY

Samples to:

Bact	Bio	Chem ✓	Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number: 204370

Type of Sample

Grab	Composite	
	Time	Space
✓		

Collection (Ending) Date: Yr 97 Mo 11 Day 25

Ending Time (24 Hr): 1238

Beginning Date: Yr 97 Mo 01 Day 25

Beginning Time (24 Hr): 1231

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split

☐ Yes ☑ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name CENTRAL STEEL DRUM

Collector(s) TRAN/DUGAN Affiliation US EPA

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar (Manual)
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other COLIWASA

LDMS CODE 0

DATA BASE CODE H

STA. TYPE CODE F

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
Solvent Extract (Other) PAINT

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	**Cleaning Procedure**	**Landfill**	**Industrial**
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	Drum	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	**Solvent Rinse:**	Depth:	(Drum)
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		**Municipal Treatment**
Paper Cap	Methylene Chloride	**Storage Tank**	Influent
Teflon Cap	Other (Specify):	Top	Effluent-Cl
Foil Cap	ESS glassware	Middle	Effluent-Non Cl
Other		Bottom	Sludge
		Truck	Ambient
Preservation		Drum	Lake
Acid		Tank	Stream
Solvent		Other	Pond
Chemical			Ocean
Wet Ice		**Wells**	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

DRUM #142

Remarks:

1-8 oz. glass jar - Ignitability

Samples to: Bact | Bio | (Chem) | Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number 204371

Type of Sample: (Grab) Composite: Time | Space

Collection (Ending) Date: Yr 87 Mo 11 Day 25

Ending Time (24 Hr) 1245

Beginning Date: Yr 87 Mo 11 Day 25

Beginning Time (24 Hr) 1238

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split ☐ Yes (☒) No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: CENTRAL STEEL DRUM

Collector(s): TARR/DUGAN Affiliation: USEPA

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar (Manual)
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: COLUMBIA

LDMS CODE

DATA BASE CODE

STA. TYPE CODE

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
(Solvent) Extract (Other) PAINT)

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	Cleaning Procedure	Landfill	Industrial
~~Glass-jar~~	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	Drum	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	Solvent Rinse:	Depth:	(Drum)
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		Municipal Treatment
Paper Cap	Methylene Chloride	Storage Tank	Influent
Teflon Cap	Other (Specify):	Top	Effluent-Cl
Foil Cap	E.S.S GLASSWARE	Middle	Effluent-Non Cl
Other		Bottom	Sludge
Preservation		Truck	Ambient
Acid		Drum	Lake
Solvent		Tank	Stream
Chemical		Other	Pond
Wet Ice			Ocean
Dry Ice		Wells	Estuary
Ambient		Monitoring	
Other		Production	
		Drinking	
		Private	

Sample Location Description:

DRUM # 140

Remarks:

1-8oz JAR : IGNITIBILITY

Samples to: Bact | Bio | (Chem) | Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number: 204372

Type of Sample: (Grab) Composite: Time | Space

Collection (Ending) Date: Yr 87 Mo 11 Day 25

Ending Time (24 Hr): 1252

Beginning Date: Yr 87 Mo 11 Day 25

Beginning Time (24 Hr): 1245

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split

☐ Yes ☑ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name CENTRAL STEEL DRUM

Collector(s) TRAN/DUGAN Affiliation US EPA

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar (Manual)

Niskin Net Seine Trawl Bucket

Trowel Cream Dipper

Automatic

Other COLIWASA

LDMS CODE D

DATA BASE CODE H

STA. TYPE CODE F

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological

(Solvent) Extract (Other) PAINT

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	Cleaning Procedure	Landfill	Industrial
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	Drum	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	Solvent Rinse:	Depth:	(Drum)
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		Municipal Treatment
Paper Cap	Methylene Chloride	Storage Tank	Influent
Teflon Cap	Other (Specify):	Top	Effluent-Cl
Foil Cap		Middle	Effluent-Non Cl
Other	ESS glassware	Bottom	Sludge
		Truck	Ambient
Preservation		Drum	Lake
Acid		Tank	Stream
Solvent		Other	Pond
Chemical			Ocean
Wet Ice		Wells	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

DRUM #139

Remarks:

1-8oz glass jar. Ignitability.

Samples to: Bact | Bio | (Chem) | Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number 204373

Type of Sample: Grab (✓) | Composite: Time | Space

Collection (Ending) Date: Yr 9 7 Mo 1 1 Day 2 5

Ending Time (24 Hr) 1259

Beginning Date: Yr 9 7 Mo 1 1 Day 2 5

Beginning Time (24 Hr) 1252

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split

☐ Yes ☒ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: Central Steel Drum

Collector(s): Tran/Dugan Affiliation: USEPA

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar (Manual)
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: Colliwasp

LDMS CODE: _____

DATA BASE CODE: _____

STA. TYPE CODE: _____

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
(Solvent) Extract (Other) PAINT)

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	Cleaning Procedure	Landfill	Industrial
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	Drum	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	Solvent Rinse:	Depth:	(Drum)
Cubitainer	Acetone	Other: _____	Waste Pile
Acetate Core	Hexane	_____	Municipal Treatment
Paper Cap	Methylene Chloride	Storage Tank	Influent
Teflon Cap	Other (Specify):	Top	Effluent-Cl
Foil Cap	E.S.S	Middle	Effluent-Non Cl
Other _____	Glassware	Bottom	Sludge
_____		Truck	Ambient
Preservation		Drum	Lake
Acid _____		Tank	Stream
Solvent _____		Other _____	Pond
Chemical _____		_____	Ocean
Wet Ice		Wells	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other _____		Drinking	
_____		Private	

Sample Location Description:

Drum #: 089

Remarks:

1-8oz JAR: Ignitibility

Samples to: Bact | Bio | Chem (✓) | Other

Station No.:

Sample Depth (Ft.)/Fac. Loc. Code:

Lab Number: 204374

Type of Sample: Grab (✓) | Composite: Time | Space

Collection (Ending) Date: Yr 97 Mo 11 Day 25

Ending Time (24 Hr): 1306

Beginning Date: Yr 97 Mo 11 Day 25

Beginning Time (24 Hr): 1259

pH:

Sample Temp. (°C):

DO (mg/l):

Cond. (uMHOS/CM):

Salinity(‰):

Sample Split

☐ Yes ☐ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: CENTRAL STEEL DRUM

Collector(s): TRAN / Affiliation: US EPA

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar (Manual)
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: COLIWASA

LDMS CODE: U

DATA BASE CODE: H

STA. TYPE CODE: F

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological (Solvent) Extract (Other) PAINT)

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	Cleaning Procedure	Landfill	Industrial
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	Drum	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	Solvent Rinse:	Depth:	(Drum)
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		Municipal Treatment
Paper Cap	Methylene Chloride	Storage Tank	Influent
Teflon Cap	Other (Specify):	Top	Effluent-Cl
Foil Cap	ESS glassware	Middle	Effluent-Non Cl
Other		Bottom	Sludge
		Truck	Ambient
Preservation		Drum	Lake
Acid		Tank	Stream
Solvent		Other	Pond
Chemical			Ocean
Wet Ice		Wells	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

DRUM #137

Remarks:

1 - 8oz. glass jar - Ignitability

Samples to: Bact | Bio | (Chem) | Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number: 204375

Type of Sample: Grab (✓) Composite: Time | Space

Collection (Ending) Date: Yr 97 Mo 11 Day 25

Ending Time (24 Hr): 1313

Beginning Date: Yr 97 Mo 11 Day 25

Beginning Time (24 Hr): 1306

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split: ☐ Yes (X) No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: CENTRAL STEEL DRUM

Collector(s): TRAN / DUGAN Affiliation: US EPA

SAMPLING METHOD (Circle)

Kemmerer, Dredge, Ponar, (Manual), Niskin, Net, Seine, Trawl, Bucket, Trowel, Cream, Dipper, Automatic, Other: COLWASA

LDMS CODE: O

DATA BASE CODE: H

STA. TYPE CODE: F

SUBSTRATE TYPE (Circle)

Aqueous, Sediment, Sludge, Oil, Biological, (Solvent), Extract, (Other) PAINT

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)

Container	Cleaning Procedure	Preservation
(Glass Jar)	Detergent Wash	Acid
Plastic Jar	Water Rinse	Solvent
Metal	Acid Rinse	Chemical
POA Vial	Solvent Rinse:	Wet Ice
Cubitainer	Acetone	Dry Ice
Acetate Core	Hexane	Ambient
Paper Cap	Methylene Chloride	Other
Teflon Cap	Other (Specify):	
Foil Cap	ESS Glassware	
Other		

Sample Source Type (Circle)

Landfill	Industrial
Leachate	Effluent
Drum	Process Stream
Test Well	Holding Pond
Depth:	(Drum)
Other:	Waste Pile
	Municipal Treatment
Storage Tank	Influent
Top	Effluent-Cl
Middle	Effluent-Non Cl
Bottom	Sludge
Truck	Ambient
Drum	Lake
Tank	Stream
Other	Pond
	Ocean
Wells	Estuary
Monitoring	
Production	
Drinking	
Private	

Sample Location Description: DRUM #135

Remarks: 1-8oz. glass jar - Ignitability

Samples to: Bact, Bio, Chem ✓, Other

Station No.:

Sample Depth (Ft.)/Fac. Loc. Code:

Lab Number: 099618

Type of Sample: Grab ✓, Composite: Time, Space

Collection (Ending) Date: Yr 97 Mo 11 Day 25

Ending Time (24 Hr): 1327

Beginning Date: Yr 97 Mo 11 Day 25

Beginning Time (24 Hr): 1320

pH:

Sample Temp. (°C):

DO (mg/l):

Cond. (uMHOS/CM):

Salinity(‰):

Sample Split: ☐ Yes ☒ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: Central Steel Drum

Collector(s): Tran / Dugan Affiliation: USEPA

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar (Manual)
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: Calumbo

LDMS CODE

DATA BASE CODE

STA. TYPE CODE

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological
(Solvent) Extract (Other) PAINT

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	Cleaning Procedure	Landfill	Industrial
(Glass Jar)	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	Drum	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	Solvent Rinse:	Depth:	(Drum)
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		Municipal Treatment
Paper Cap	Methylene Chloride	Storage Tank	Influent
Teflon Cap	Other (Specify):	Top	Effluent-Cl
Foil Cap	E.S.S.	Middle	Effluent-Non Cl
Other	9/ASSUMED	Bottom	Sludge
Preservation		Truck	Ambient
Acid		Drum	Lake
Solvent		Tank	Stream
Chemical		Other	Pond
Wet Ice		Wells	Ocean
Dry Ice		Monitoring	Estuary
Ambient		Production	
Other		Drinking	
		Private	

Sample Location Description:

Drum # 132

Remarks:

1-8oz JAR: IGNITABILITY

Samples to:

Bact	Bio	Chem	Other
		/	

Station No.:

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number: 099619

Type of Sample: Grab (/) Composite: Time Space

Collection (Ending) Date: Yr 97 Mo 11 Day 25

Ending Time (24 Hr): 1334

Beginning Date: Yr 97 Mo 11 Day 25

Beginning Time (24 Hr): 1327

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split: ☐ Yes (/) No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: CENTRAL STEEL DRUM

Collector(s): TRAN/DUGAN Affiliation: USEPA

SAMPLING METHOD (Circle)

Kemmerer, Dredge, Ponar, (Manual), Niskin, Net, Seine, Trawl, Bucket, Trowel, Cream, Dipper, Automatic, Other: COLIWASA

LDMS CODE: O

DATA BASE CODE: H

STA. TYPE CODE: E

SUBSTRATE TYPE (Circle)

Aqueous, Sediment, Sludge, Oil, Biological, (Solvent), Extract, (Other): PAINT

BOD - Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)

Container	Cleaning Procedure	Preservation
(Glass Jar)	Detergent Wash	Acid
Plastic Jar	Water Rinse	Solvent
Metal	Acid Rinse	Chemical
POA Vial	Solvent Rinse:	Wet Ice
Cubitainer	Acetone	Dry Ice
Acetate Core	Hexane	Ambient
Paper Cap	Methylene Chloride	Other
Teflon Cap	Other (Specify):	
Foil Cap	ESS glassware	
Other		

Sample Source Type (Circle)

Landfill	Industrial
Leachate	Effluent
Drum	Process Stream
Test Well	Holding Pond
Depth:	(Drum)
Other:	Waste Pile
	Municipal Treatment
Storage Tank	Influent
Top	Effluent-Cl
Middle	Effluent-Non Cl
Bottom	Sludge
Truck	Ambient
Drum	Lake
Tank	Stream
Other	Pond
	Ocean
Wells	Estuary
Monitoring	
Production	
Drinking	
Private	

Sample Location Description: DRUM #235

Remarks: 1-8oz. glass jar - Ignitability

Samples to: Bact, Bio, Chem ✓, Other

Station No.:

Sample Depth (Ft.)/Fac. Loc. Code:

Lab Number: 099620

Type of Sample: Grab ✓, Composite: Time, Space

Collection (Ending) Date: Yr 97 Mo 11 Day 25

Ending Time (24 Hr): 1341

Beginning Date: Yr 97 Mo 11 Day 25

Beginning Time (24 Hr): 1334

pH:

Sample Temp. (°C):

DO (mg/l):

Cond. (uMHOS/CM):

Salinity(‰):

Sample Split: ☐ Yes ☒ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: Canton Steel / Drum

Collector(s): Trout / Digon Affiliation: USEPA

SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar (Manual)
Niskin Net Seine Trawl Bucket
Trowel Cream Dipper
Automatic
Other: Coliwasa

LDMS CODE:

DATA BASE CODE:

STA. TYPE CODE:

SUBSTRATE TYPE (Circle)

Aqueous Sediment Sludge Oil Biological
(Solvent) Extract (Other) PAINT

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	Cleaning Procedure	Landfill	Industrial
~~Glass Jar~~	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	Drum	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	Solvent Rinse:	Depth:	(Drum)
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		Municipal Treatment
Paper Cap	Methylene Chloride	Storage Tank	Influent
Teflon Cap	Other (Specify):	Top	Effluent-CI
Foil Cap		Middle	Effluent-Non CI
Other		Bottom	Sludge
		Truck	Ambient
Preservation		Drum	Lake
Acid		Tank	Stream
Solvent		Other	Pond
Chemical			Ocean
Wet Ice		Wells	Estuary
Dry Ice		Monitoring	
Ambient		Production	
Other		Drinking	
		Private	

C.S.S. GLASSWARE

Sample Location Description:

Drum # 117

Remarks:

1-8oz Jar: Ignitability

Samples to: Bact | Bio | Chem (✓) | Other

Station No.:

Sample Depth (Ft.)/Fac. Loc. Code:

Lab Number: 099621

Type of Sample: Grab (✓) | Composite: Time | Space

Collection (Ending) Date: Yr 97 Mo 11 Day 25

Ending Time (24 Hr): 1348

Beginning Date: Yr 97 Mo 11 Day 9 T.M.T.

Beginning Time (24 Hr): 1341

pH:

Sample Temp. (°C):

DO (mg/l):

Cond. (uMHOS/CM):

Salinity(‰):

Sample Split: ☐ Yes ☑ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name: Central Steel Drum

Collector(s): Rau/Dugan Affiliation: USEPA

SAMPLING METHOD (Circle)

Kemmerer, Dredge, Ponar, (Manual), Niskin, Net, Seine, Trawl, Bucket, Trowel, Cream, Dipper, Automatic

Other: Coliwasa

LDMS CODE

DATA BASE CODE

STA. TYPE CODE

SUBSTRATE TYPE (Circle) Aqueous, Sediment, Sludge, Oil, Biological, Solvent, Extract, (Other) PAINT

BOD — Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)

Container	Cleaning Procedure	Preservation
(Glass Jar)	Detergent Wash	Acid
Plastic Jar	Water Rinse	Solvent
Metal	Acid Rinse	Chemical
POA Vial	Solvent Rinse:	Wet Ice
Cubitainer	Acetone	Dry Ice
Acetate Core	Hexane	Ambient
Paper Cap	Methylene Chloride	Other
Teflon Cap	Other (Specify):	
Foil Cap	G.S.S.	
Other	9/ASSWARE	

Sample Source Type (Circle)

Landfill	Industrial
Leachate	Effluent
Drum	Process Stream
Test Well	Holding Pond
Depth:	(Drum)
Other:	Waste Pile
	Municipal Treatment
Storage Tank	Influent
Top	Effluent-Cl
Middle	Effluent-Non Cl
Bottom	Sludge
Truck	Ambient
Drum	Lake
Tank	Stream
Other	Pond
	Ocean
Wells	Estuary
Monitoring	
Production	
Drinking	
Private	

Sample Location Description:

Drum #4 134

Remarks:

1-8oz Jar - Ignitibility

Samples to: Bact, Bio, (Chem), Other

Station No.:

Sample Depth (Ft.)/Fac. Loc. Code: 1

Lab Number: 099617

Type of Sample: Grab / Composite: Time, Space

Collection (Ending) Date: Yr 97 Mo 11 Day 25

Ending Time (24 Hr): 1320

Beginning Date: Yr 97 Mo 11 Day 25

Beginning Time (24 Hr): 1313

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split: ☐ Yes ☑ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Form: FTB RPD-11-82-2

ANALYSIS REQUEST

CHEM	BIO.	BACT.	OTHER
X			

ENVIRONMENTAL PROTECTION AGENCY
Environmental Services Division — EDISON, N.J.

Date of Request 11/25/97 — Priority ☒ Immediate ☐ Normal ☐ Deferred
Source of Sample(s) [illegible] Steel Drum
Sample Number(s) [illegible]
Type of Sample ☐ Water ☐ Sediment ☐ Oil ☐ Air ☒ Other (Specify) Solvent/Paint

PHYSICAL CHARACTERISTICS

☐ Turbidity
☐ Volatile Solids
☐ Total Suspended Solids
☐ Volatile Suspended Solids
☐ Color
☐ Total Solids
☐ Dissolved Solids
☐ Settleable Solids
☐ Specific Gravity
☐ Viscosity
☐ % Solids
☒ Ignitability (RCRA)
☐ Corrosivity (RCRA)
☐ Other

ORGANIC/DEMAND ANALYSES

☐ ___ Day BOD
☐ COD
☐ TOC
☐ TOD
☐ PCB's
- ☐ Total
- ☐ Specific Aroclors

☐ Phenol
☐ Pesticides
☐ Herbicides
☐ Long-term O_2 Demand (Carbon)
☐ Long-term O_2 Demand (Total)
☐ Volatile Acids
☐ Oil (Identify)

☐ Priority Pollutants
- ☐ POA
- ☐ NVOA
- ☐ Other Major Peaks

☐ EP Toxicity
- ☐ Pesticides
- ☐ Herbicides

☐ Oil & Grease (Quantitate)

☐ Specific Compound
- ☐ Identify
- ☐ Quantitate

INORGANIC ANALYSES

☐ pH
☐ Conductivity
☐ Salinity
☐ Chloride
☐ SO_4
☐ SO_3
☐ Dissolved S
☐ Hardness
- ☐ Ca
- ☐ Mg
- ☐ Total/METHOD

☐ Alkalinity
- ☐ CO_3
- ☐ Total
- ☐ HCO_3

☐ Chlorine Demand
☐ Chlorine Residual
- ☐ Free
- ☐ Total

☐ Acidity
- ☐ Free
- ☐ Total

☐ TKN
☐ Org N
☐ NH_3-N
☐ NO_2-N
☐ NO_3-N
☐ Total P
☐ AH-P
☐ Ortho-P
☐ Metal Scan
☐ EP Toxicity (Metals)
☐ Hg

☐ Cd
☐ Co
☐ Cu
☐ Pb
☐ Zn
☐ Fe
☐ Cr
☐ As
☐ CN-
☐ F-
☐ Ni

☐ Ba
☐ Se
☐ Ag
☐ Asbestos
☐ Hexavalent Cr

SENSITIVITY / METHOD

☐ COD
- ☐ High Level (> 50 mg/l)
- ☐ Low Level (< 50 mg/l)

☐ Phosphorous
- ☐ Total
- ☐ Dissolved

☐ Phenol
- ☐ 0-1,000 ppb
- ☐ Above 1,000 ppb

☐ Metals
- ☐ Total
- ☐ Dissolved
- ☐ Low Sensitivity
- ☐ High Sensitivity

MICROBIOLOGY

	MF	MPN	Est. Range
TC	☐	☐	
FC	☐	☐	
FS	☐	☐	

☐ Pathogens
- ☐ Bacterial
- ☐ Viral

☐ Clostridium perfringes
☐ Mutagenicity Tests
- ☐ Ames Test
- ☐ Viral Enhancement
- ☐ Other (Specify)

☐ ATP

BIOLOGY

☐ 24 Hour Bioassay
☐ 48 Hour Bioassay
☐ 96 Hour Bioassay
☐ Chronic Bioassay
☐ Benthos ID
☐ Fish ID

☐ Static
☐ Flow-Through
☐ Static Replacement
☐ Laboratory
☐ On Site
☐ Identify
☐ Quantitate

Requested by [signature] Date 11/25/97 Approved by ______ Date ______

Remarks

Form: FTB RPD-11-82-1

CHAIN OF CUSTODY RECORD

ENVIRONMENTAL PROTECTION AGENCY – REGION II
Environmental Services Division
EDISON, NEW JERSEY 08817

Name of Unit and Address: Central Steel Drum
Delancey St. + Dorcmus Ave
Newark, NJ

Sample Number	Number of Containers	Description of Samples
204357	1	8 oz Glass Jar Sanitapitty (RCRA) – Drum #033
204358	1	" – Drum #066
204359	1	" – Drum #068
204360	1	" – Drum #119
204361	1	" – Drum #122
204362	1	" – Drum #008
204363	1	" – Drum #009
204364	1	" – Drum #056
204365	1	" – Drum #114
204366	1	" – Drum #059
204367	1	" – Drum #170
204368	1	" – Drum #076
204369	1	" – Drum #148
204370	1	" – Drum #147
204371	1	" – Drum #142
204372	1	" – Drum #140
204373	1	" – Drum #139
204374	1	" – Drum #089
204375	1	8 oz Glass Jar Sanitapitty (RCRA) – Drum #137

Person Assuming Responsibility for Sample: [signature] Time: [illegible] Date: [illegible]

Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody
204357 – 204375	[signature]	[signature]	[illegible]	11/24/87	

Page No.

CHAIN OF CUSTODY RECORD

ENVIRONMENTAL PROTECTION AGENCY – REGION II
Environmental Services Division
EDISON, NEW JERSEY 08817

Name of Unit and Address: Central Steel Drum
Delancey St. & ~~Doremus~~ KMJ Doremus Ave.
Newark, NJ

Sample Number	Number of Containers	Description of Samples
099617	1	8 oz glass for Ignitability (RCRA) - Drum #104
099618	1	" " " " - Drum #135
099619	1	" " " " - Drum #132
099620	1	" " " " - Drum #235
099621	1	" " " " - Drum #117

Person Assuming Responsibility for Sample:	Time	Date
[illegible signature]		

Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody
099617–099621	[illegible signature]	[illegible signature]	[illegible]	[illegible]	[illegible]

Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody

Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody

Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody

Receipt of Samples

~~CHAIN OF CUSTODY RECORD~~ KMD

ENVIRONMENTAL PROTECTION AGENCY – REGION II
Environmental Services Division
EDISON, NEW JERSEY 08817

f Unit and Address: Central Steel Drum
Delancey St. & Dorcmus Ave.
Newark, NJ

Number of Containers	Description of Samples
1	8 oz glass for Ignitability (RCRA) - Drum # 147
1	8 oz glass for Ignitability (RCRA) - Drum # 142
1	" " " " " - Drum # 140
1	" " " " " - Drum # 139
1	" " " " " - Drum # 089
1	" " " " " - Drum # 137
1	" " " " " - Drum # 104
1	" " " " " - Drum # 135
1	" " " " " - Drum # 132
1	" " " " " - Drum # 235
1	" " " " " ~~Drum~~ KMD
1	~~8 oz~~ KMD 8 g. glass for Ignitability (RCRA) - Drum # 117

Person Assuming Responsibility for Sample:

Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody

Page No.

Receipt of Samples
~~CHAIN OF CUSTODY RECORD~~ KMS

ENVIRONMENTAL PROTECTION AGENCY — REGION II
Environmental Services Division
EDISON, NEW JERSEY 08817

Name of Unit and Address: Central Steel Drum
Delancey St. + Doremus Ave.
Newark, NJ

Sample Number	Number of Containers	Description of Samples
	1	8 oz glass for Ignitability (RCRA) - Drum # 033
	1	" " " " " - Drum # 066
	1	" " " " " - Drum # 068
	1	" " " " " - Drum # 119
	1	" " " " " - Drum # 122
	1	" " " " " - Drum # 008
	1	" " " " " - Drum # 009
	1	" " " " " - Drum # 056
	1	" " " " " - Drum # 114
	1	" " " " " - Drum # 059
	1	" " " " " - Drum # 170
	1	" " " " " - Drum # 076
	1	8 oz glass for Ignitability (RCRA) - Drum # 148

Person Assuming Responsibility for Sample:	Time	Date

Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody
Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody
Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody
Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody